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BOROUGH OF PRESTON.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

URBAN AND PORT SANITARY AUTHORITIES,

FOR THE

Year ending December 31st, 1912.

H. O. PILKINGTON,

Medical Officer of Health,

Medical Officer to the Port Sanitary Authority,

Medical Superintendent Isolation Hospital.

ROYAL STATISTICAL SOCIETY
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Report of the Medical Officer of Health.

TO THE CHAIRMAN AND MEMBERS OF THE HEALTH COMMITTEE.

Gentlemen,

I have the honour to submit the following Report dealing with the Sanitary condition of Preston, and the health of the inhabitants during the past year of 1912. And I would again explain that any discrepancy which may appear in the figures of certain tables is due to the fact that Tables Nos. 1, 2, 3, 4 and 6 deal with the births and deaths which have occurred within the limits of the Borough boundary, Nos. 1a, 3a, and 4a include the vital statistics connected with the Workhouse, although this is situated in the adjoining township of Fulwood.

I would also point out the difficulty of comparing the sanitary conditions of one town with that of another by means of statistics alone, and without regard to existing conditions, since a town which extends its boundaries, and takes in the out-lying suburbs, with their generally young and healthy inhabitants, must needs show a better return than the town which confines itself to its original limits, and so excludes from its figures that section of its population which may naturally be expected to show the most satisfactory results.

In this respect, Preston is unfortunately situated, and as a consequence compares unfavourably with many other towns, especially with many of the manufacturing towns of Lancashire.

The township of Fulwood, really and essentially a part of the Borough, has not been incorporated, whilst on the South side the river Ribble forms a natural line of demarcation, cutting off the growing districts of Walton-le-Dale, Bamber Bridge, Brownedge, and Penwortham. The last named district especially is largely occupied by persons—often young married couples—whose business or occupation is carried on in the town, but who have selected a suburban residence, partly from motives of economy, but mainly in order that they may enjoy the advantages of greater space and purer air. Now-a-days any drawback resulting from distance, is largely overcome by increased facilities for conveyance by tram, train, or by cycle. The incorporation of such outlying districts increases the population and adds to the importance of a town, whilst the addition of a population—mainly composed of young persons in comfortable circumstances—must have a good effect upon its vital statistics.

I again refer to these matters, although they have been mentioned in former Reports, because they should be taken into consideration when estimating the sanitary condition of a town, and especially when drawing a comparison between its returns of births, deaths, and sickness, and those of any other town, the inhabitants of which, may at first sight, appear to be living under similar conditions.

In the general formation of the present Report, and as regards the Tables, Plans, Charts, &c., I have, in the main, followed the lines of former years; not by any means because I consider them incapable of improvement, but because the adherence to one style enables a ready comparison to be made of the sanitary condition of the town during the past twelve months with that of the previous year, or of any series of preceding years.

The various calculations for 1912, have been based upon a population estimated by the Registrar General at 117,630, thus allowing an increase of 414 over the population of the previous year, whereas the natural increase—the excess of births over deaths—has been equal to 927 lives during the twelve months. In the year 1899, twelve years ago, the population was assessed at 117,622, or at about the same figure as at present, whilst there has been a natural increase of 15,236 lives in the period which has since elapsed.

Whilst some of this loss of population may be explained by emigration to Canada, Australia, and other countries, a still greater part is probably due to the transference of households from within the Borough, to surrounding suburban districts.

For this reason it is from a statistical point of view desirable that these districts, adjoining Preston, and with inhabitants largely composed of Prestonians, should be included in the Borough, or, if this is not done, then that due consideration should be given to a circumstance which has such a direct bearing upon the sanitary statistics of the town.

As regards climate and temperature, the year 1912 resembled many of the years immediately preceding, in as much as the rainfall was heavy, and the summer a short one, with no long period of excessive heat. These conditions undoubtedly exercised a beneficial influence upon Diarrhœa and kindred diseases, the mortality from which was unusually low, but to the absence of summer warmth and sunshine must probably be attributed the marked increase in Diphtheria and septic affections of the throat. The weather during the early months of the year, without being marked by prolonged frost, was cold and trying, and as usual this had the effect of increasing the sickness and mortality from such affections as Influenza, Bronchitis, and other forms of respiratory disease.

These are matters which will, however, be more thoroughly gone into in discussing the various headings under which are tabulated the deaths which go to make up the total mortality return for the year.

Dealing with the first disease on the Mortality Table—Small Pox—it is satisfactory to be able to record not only that no death occurred from this cause, but also that no case of sickness came under observation throughout the year. But the disease was present in the Kingdom, as many as 111 cases being reported during the twelve months, many of them occurring in towns connected with Ports, and therefore liable to importation of the disease, whilst an additional 12 were directly notified to various Port Sanitary Authorities.

The fact that many European countries are often visited by outbreaks of Small Pox, and that in some it is frequently, if not annually met with in epidemic form, is a sufficient menace to this country, since vessels in the Merchant Service are in constant communication with sea-ports distributed over all parts of the World. Fortunately the various Port Sanitary Authorities keep a close watch upon the passengers and crews of all foreign coming vessels, and this forms the first line of defence against the introduction of Small Pox, or any other form of infectious disease.

But a case may be concealed or may not have arrived at a recognizable stage, and so may find its way inland; or the infection may be spread through the medium of merchandise, luggage, or articles of any kind which have been in contact with a recent case of the disease.

If the infection once gets a hold in any town or district, in which many of the inhabitants are unvaccinated, and therefore liable to contract the disease, the work of stopping the spread of infection becomes exceedingly difficult. The best and surest safeguard for any community is that its members should be well and systematically vaccinated and re-vaccinated. For such there is little need of apprehension, since if not actually immune to the disease, they will be so far protected that the attack may confidently be expected to be a mild one, shorn of much of its severity and danger. But the protection undoubtedly afforded by efficient vaccination, appears to be falling into disuse, the means of obtaining exemption are rendered easier and easier, and as a consequence, a considerable section of the population are not only themselves unprotected, but in time of epidemic are a source of danger to others.

It would be well if parents would carefully consider the possible dangers to which they are exposing their children by claiming for them this exemption, and if they would also remember that, in times of epidemic, the demands for vaccination become both numerous and urgent, and that there may then be a difficulty in obtaining the protection in time to be of any service.

Since the prevalence, or otherwise, of Typhoid Fever is to a certain extent an index of the sanitary condition of any town or district, it is satisfactory to find that during the past year, the amount of sickness, and the consequent deaths, from this disease have alike been unusually low. The same condition appears to have been present in most of the larger towns, a result no doubt, in part at least, due to the absence of any prolonged period of intense heat, and to the abundant rainfall, which had the effect of cooling the ground and air, and of ensuring a thorough cleansing of the drains and sewers.

The cases reported numbered 47, and were followed by 8 deaths, the mortality being thus equal to 17 per cent. of the sickness. Most of the illness, and all the fatal cases occurred towards the centre or eastern side of the town; and whilst 18 of the patients were removed to hospital, only 2 deaths took place amongst this number. This is a disease in which hospital treatment and skilled nursing are of especial importance, and the advantages offered by a suitable Institution are well marked, especially when compared with the resources of an ordinary cottage house.

Where the patient remained at home, suitable pails were provided, and arrangements made for the frequent and regular removal of the excreta, whilst a liberal supply of disinfectant was furnished for use about the house and premises.

Reference was made in the Report for 1911, to the fact that Measles, although not prevalent during the year, was still in evidence in certain localities, especially during the concluding months. In the early part of 1912, numerous cases came under notice, and the deaths of 2 children were registered in January as due to this cause. The usual difficulties were experienced in getting parents to regard the disease as the serious and frequently fatal, one which it undoubtedly is, and to induce them to protect their children from the risk of infection; or in the event of their being attacked, to keep them in bed, and so prevent them from contracting Bronchitis or any of the similar chest affections which so frequently accompany or follow an attack of this description. Posters were affixed throughout the town enforcing the above points, and special attention was given to the Schools, in order that any cases, which so far had escaped recognition, might be detected, and at once excluded from communication with other children. Several of the Schools in which the infection had been present were disinfected, in some instances repeatedly, and in addition, the forms, slates, books, &c. were sprayed over with a Formalin Solution.

These proceedings appeared to have a good effect, at any rate, after March the number fell away, and the disease remained quiescent until October, when there was a decided recrudescence, and the infection continued to spread until the end of the year.

Altogether 90 deaths, with 10 exceptions all under the age of five years, were directly referred to this cause, and of this number, 83 were registered during the months of November and December. But in addition to the above-named deaths, a great deal of the sickness and mortality, which at that time was occurring from Bronchial affections amongst young children, might in many instances be traced to a recent attack of Measles, and in this way, the disease—so lightly thought of—takes a heavy toll of early life. Because its danger is so much disregarded, the disease is one especially difficult to combat, and it is only in the better education of the people—brought about by iterated and re-iterated instruction—that one can hope for any very decided improvement. Notification of the disease is in force in certain towns, whilst in others—as is Preston—it has been tried and discarded, the results obtained being in no way in proportion to the required outlay of time and money. This, in a great measure, is due to the long period of incubation, during which the disease is capable of being transmitted to others, before the appearance of the characteristic rash enables its true nature to be recognised.

Whooping Cough, which may be regarded as a disease allied to Measles, since it so frequently runs concurrently with the last named, or follows closely in its wake, was the cause of 42 deaths, of which 18 were those of infants, and the remaining 24 those of children between the ages of one and five years. The disease was present from the beginning of the year, and continued until the early part of May, after which it subsided, only 5 deaths being recorded during the last six or seven months. In dealing with this disease of childhood, the same course was adopted as in the case of Measles. Posters, giving advice and instruction, were freely published throughout the town, and a watch was kept upon the children attending School, in order that early, or suspicious cases might at once be excluded.

The outbreak of Scarlet Fever, which was present during 1911, continued throughout the whole of the past year. Both the cases of sickness and the deaths were more numerous during the latter period, the notifications numbering 590, and the fatal cases 36, the latter representing a case-fatality of 6.10 per cent. The rate amounted to 0.31 per thousand of the population, and was the highest of any of the 39 large towns.

Although the prevailing type of the disease was a mild one, there were indications during the months of May, June, and July, of a tendency to revert to the more severe form, which in past years was so frequently met with.

Such cases were marked by a septic condition of the mouth and throat, the latter often showing distinct patches, and this condition, taken in conjunction with a well marked rash, pointed to the probability of a mixed infection.

Of the total number of cases notified, 289, or about one-half, were removed to hospital, where the deaths amounted to 15, several of these being cases of a severe, even malignant, nature, which terminated fatally within a very short interval after admission. The infection extended over the whole town, first one district, and then another being visited by an outbreak, often showing itself in connection with one of the Elementary Schools. As is so often the case, many of these outbreaks were connected with unrecognised, or possibly concealed cases; and the Schools were frequently visited, the children inspected, and all suspicious cases excluded from attendance.

In several recent Annual Reports, the increasing prevalence of Diphtheria has been referred to, the increase being especially apparent during the last three years. The actual number of cases reported was higher in 1912 than in any previous year, although nearly approached by that for the year—1911—immediately preceding.

Notifications were received of 238 cases, of which 39 proved fatal, the case mortality working out in the ratio of 16.40 per cent.

Of the patients reported, 115, or nearly one-half were removed to hospital, and of these cases 18, or 14.7 per cent. terminated fatally. Some of these last named patients were in a hopeless condition when admitted, and died within the space of a few hours. It is difficult to account for this increased prevalence of Diphtheria, which was not confined to this town alone, but probably the great amount of rain, and the absence of the average amount of sunshine during the year, were important factors in this direction. Or if not the actual causes of Diphtheria, these conditions had the effect of increasing the number of throat affections, and consequently the number of notifications received, since some of the cases were probably not true Diphtheria, but rather due to a septic condition of the throat, accompanied with patches of ulceration. In certain instances, upon investigation it was found that the ground in the neighbourhood of the patients residence had recently been disturbed or opened up for the purpose of forming a Street, and in this way a number of germs may have been liberated, and so found their way into the surrounding atmosphere. St. John's, St. Peter's, Park, Trinity, and Deepdale Wards showed the greatest number of deaths, and though these were spread over the whole year, the heaviest mortality occurred in the month of February.

Reference has already been made to the absence of any prolonged period of heat during the year, the shortness of the Diarrhœal season, and the consequent marked diminution in the number of deaths occasioned by Diarrhœa in epidemic form. This number—24—is greatly below the average of previous years, and is indeed below that—28—recorded during the exceptionally favourable year of 1910, when the conditions as regards rainfall and temperature were very similar to those of the past twelve months.

Of the deaths from Diarrhœa, 13 were registered in infants under the age of twelve months, and an additional four in children between the ages of 1 and 2 years. In Table IVA. the deaths from Diarrhœa in children under the age of one year are given as 24, but this figure includes fatal cases of Gastro Enteritis and similar infantile diseases of a non-epidemic type.

An examination of the Chart appended to this Report, and a comparison between the curve of Diarrhœal mortality as there shown, and those charted in previous Reports, will show in a striking manner the great reduction which, during the last few years, has occurred in the mortality from this cause. The low temperature of the summer months and the heavy rainfall recorded in July and August account to some extent for the improvement during the past twelve months, but there must also be taken into account the effects of the sanitary supervision of the town, and the instruction and advice given by the Health Visitors with regard to the management and feeding of young children.

During, and immediately preceding, the Diarrhœal season frequent re-visits were made by the Health Visitors to those houses in which births had occurred some two or three months previously. This is of importance because a large proportion of the Infantile Diarrhœal deaths are registered between the ages of three and nine months, the period when breast feeding is often discontinued, and injudicious and unsuitable food too frequently takes its place.

The Deaths from Consumption, otherwise Phthisis or Tuberculosis of the Lungs, are returned as 96, a number very slightly below that of the preceding year, but showing a considerable decrease upon the returns as shown in previous years. Latterly the subject of Tuberculosis and its treatment has taken a prominent position amongst the questions relating to Public Health, and has engaged the attention not only of Scientists and the Medical Profession, but of all who, having seen the ravages wrought by the disease, are anxious to do what is possible for its reduction, and—if it can be effected—its extermination.

The discovery of Tuberculin, and its adaptation to curative treatment, raised the hope that at last a remedy had been found for this wide-spread disease, but the extent of its value in this direction still remains to be proved. That it has its limitations is certain, and it is equally certain that whilst in a number of instances it may be productive of the greatest benefit it is also a possible agent for evil, and in unsuitable cases or in unskilled hands, its use may be followed by disasterous results.

The Insurance Bill and the Report of the Departmental Committee have directed public attention to the treatment of Tuberculosis, and the result will be seen in the foundation of a large number of Tuberculosis Dispensaries, staffed by experienced Medical Officers, and having in connection with them, Sanatoria for early and hopeful cases, and hospital accommodation for those in more advanced conditions.

It may surely be expected that such a wide spread, elaborate, and expensive scheme will be attended with good results, one of which will be that a number of cases will be recognised whilst still in the very early stage, and therefore in a condition likely to respond to suitable treatment. In addition to the benefits which a patient may be expected to derive from residence in a Sanatorium—benefits the result of fresh air, good living, regular hours, and freedom from mental worry or bodily fatigue—he will, by precept and example, receive instruction as to how, upon his return to his home, he can so conduct his life as no longer to form a source of danger to those with whom he must of necessity be brought into contact. The very publicity recently given to the disease, to the danger of infection, and the manner in which it may be propagated is likely to have a good effect. The patient and his friends become better informed as to the dangers arising from the dried sputum, the folly of allowing it to remain uncollected and undestroyed, the beneficial effect of fresh air by night as well as by day, the necessity for temperance and a regular mode of living, and other points about which they may already have had some knowledge, but which are now more urgently and repeatedly brought before their notice.

It cannot be expected that any plan of treatment will be successful unless the patient is living amongst fairly sanitary surroundings.

In the campaign against Tuberculosis, general sanitation must play a large and important part both as regards the relief, or cure, of persons already affected, and the transmission of the disease to others. Without the co-operation of the patient and his relatives no plan of treatment will be successful, because upon them must depend the cleanliness of the house, the ventilation of the bedroom, and the removal of those accumulations of dirt and rubbish which form the resting and breeding places of dangerous germs.

Notifications of Phthisis to the number of 191 were received during the year. Of these 153 were under the Regulations of 1911, 30 were cases in Union practice, and 8 were hospital patients. Upon receipt of notice all the cases were visited, a card of instructions as to precautions to be adopted was supplied, and, where required, an order was given for sputum flask and disinfectants. In this way 90 flasks were distributed during the year.

Bronchitis and Inflammation of the Lungs were, in combination, the cause of 322 deaths, of which a considerable proportion occurred during the first three months of the year. Many of these deaths were those of elderly persons, but 89 were registered under the age of two years, and in many of these latter cases the chest affection followed upon an attack of Measles. It is these complications which render Measles so frequently fatal, especially amongst very young children, and though it is by no means necessary that a child should at any time have Measles, it is something gained if the attack can be delayed until the child has attained the age of five years or upwards, when it is better able to cope with the disease and its consequences.

From Teething, Premature Births, and Debility, the deaths of 259 infants and young children have been recorded, a number below that of the previous year, and also below the average extending over a considerable period. A detailed list of the various causes which have combined to make up the total number of deaths under the age of twelve months is given in Table 4A., but here the ages are given in weekly periods up to the first month, and afterwards in three-monthly periods to the end of the year. Of these deaths 75 were ascribed to Premature Birth, the majority surviving their birth by a very short time, and 60 to Atrophy, Debility, or Marasmus, whilst a further 16 are registered as due to Convulsions without any further description as to the exciting cause.

Estimated in the usual way, the Infantile Death-rate stands in the proportion of 122 deaths under the age of one year to each thousand births, a figure above that of the majority of the large towns, but showing a decided improvement upon the returns of previous years. It is certainly the lowest for the past ten years, the average for each of which works out at about 166 per thousand births, whilst going still further back the return for each year will be found to have been very much heavier.

The deaths from Old Age number 111, and those from Violence—Accident, and Suicide—62, both these figures showing little variation from the returns of previous years.

“Other Diseases” account for 701 deaths, but further particulars with regard to these are given on Table 3A, which also includes the Workhouse deaths. Various forms of malignant disease, under the heading of Cancer, account for 113 deaths, which with very few exceptions are all those of persons above the age of 45 years. To Organic Heart Disease 175 deaths are ascribed, and these again are mainly distributed amongst persons who have exceeded the middle period of life.

Cerebral Hœmorrhage is not specially mentioned as a cause of death, but it is one to which each year a considerable amount of mortality is attributed. Of late years this would appear to be on the increase, very probably owing to the more strenuous conditions under which the lives of many persons are now passed.

The total number of deaths registered from all causes within the Borough was 1797, and this is equal to a yearly rate of 15.28 per thousand on a population of 117,630, as estimated for the middle of the year. This rate is slightly below that for the previous year, but rather higher than those registered in 1909 and 1910, which years showed the most favourable returns on record.

The number of births registered during the twelve months was 2724, representing a rate of 23.16 per thousand, the lowest that has been returned since the system of registration was commenced. This gradual diminution in the births, which has now been going on for some years, was general throughout the whole of the kingdom, and several of the large towns in Lancashire—Bolton, Oldham, Burnley, and Blackburn—showed rates even lower than that of Preston. The loss to the population is one of national importance, and is beginning to make itself felt in the smaller number of children upon the registers of the elementary schools. Taken in connection with the emigration of young people to other countries, this means a serious depletion in what should be the most valuable asset of any nation, a healthy up-rising population, capable of holding its own in the world, and of maintaining the honour and prosperity of the mother country.

Apart from the question of thrift, one cause leading up to the limitation of families is the growing desire amongst all classes for greater freedom, and more frequent opportunities for pleasure, and the consequent dislike to the irksome restraint involved in the bringing-up and management of a large family. Putting upon one side the moral aspect, those persons incur a grave responsibility who by tacit acquiescence, active approval, or instruction in any form, assist in bringing about a condition of things detrimental to the individual, and opposed to the best interests of the nation.

The provisions of The Notification of Births Act, appear now to be generally understood, and with very few exceptions all births have been notified within a very short interval after the event. The number reported, either verbally or by letter, at the Health Office was 2,746, in addition to which notices were received of 84 Still-births. Of the births, 1,625, or 61 per cent., were attended by mid-wives; and 617, or 23 per cent., by medical practitioners. In 402 of the cases under the care of midwives medical assistance was required.

At the beginning of the year the number of names upon the Midwives Register was 53, to which 4 additional ones have since been added, but two of the midwives have left the town for other districts, so that 55 is the number of names at present remaining upon the Register.

During the first months of the year all the midwives, together with their bags and appliances were inspected, but a number were at different times afterwards interviewed on account of circumstances in connection with their occupation.

In 1902, the date of the passing of The Midwives Act, only 7 per cent. of the women held any qualification beyond that of being in actual practice; but the proportion has now been increased to 29 per cent., and in a number of instances there has been a marked improvement as regards cleanliness both of person and utensils. Only two cases of Puerperal Fever were reported during the year, and of these one terminated fatally.

I had occasion to report one midwife to the Central Board for neglecting to obtain medical assistance in a confinement attended with rupture of the Perineum, and followed in consequence by septic absorption. She was at the time suspended from duty, and, after the hearing of the case, was censured by the Board.

There is, taking it altogether, an improvement as regards midwives, a more educated and better trained class gradually superseding those of the older school, whilst as regards many of the latter, the work is now done with greater care, and a more strict attention to cleanliness.

The result is shown in the diminished number of cases of Puerperal Fever; whilst where a case has occurred, isolation and the use of disinfectants has prevented the infection from spreading, and so causing one of those epidemics which in former years were not unfrequently the cause of so much sorrow and loss of life. Cases of Puerperal Fever are amongst those illnesses most to be regretted, since the person affected must be in the very prime of life, and her death leaves a baby, and possibly a household of young children, deprived of a mother's care and attention at the very time when they are most required.

Table No. 9 gives a summary of the work done by the Sanitary Inspectors during the year. Additional duties are constantly being relegated to the Public Health service, some of which—like those attendant upon the carrying out of the Shop Hours' Act, 1912—only seem to touch the border line of sanitary work, whilst at the same time they make considerable demands upon the Inspectors in seeing that the provisions of the Act are properly obeyed in their respective districts. The work of converting the old privy-middens to the water carriage system is now practically completed in the town, only a very small number now remaining, and it is to be hoped that these, which for special reasons have so far been allowed to remain unaltered, will before long be satisfactorily dealt with. The value of such improvements, and the marked addition to the health and comfort of the tenants cannot be overestimated, and it is to these alterations that much of that diminution in the rate of mortality, observable during recent years, must be attributed.

Another progressive step, attended with the best results, has been the substitution of flags for the pebble pavement at one time almost universally to be found in the yards connected with the older houses in the town. The result of these changes has been that the sub-soil is no longer permeated with filth and liquid refuse, and that the yard now presents a smooth and level surface which admits of, and even gives an invitation to greater cleanliness. However circumscribed the space may be, a house provided with a flagged yard, a water closet, and a pail for dry ashes, affords opportunity for being kept in a sanitary condition, and it rests with the householder himself whether or not he takes full advantage of the means provided. As the laws of health become more generally known an improvement in this respect may reasonably be expected and a good deal of sickness, caused, or fostered, by dirt and accumulations of rubbish, will thus be prevented. The property owner has also a right to expect that his tenant will make proper use, and take reasonable care, of that which, at considerable cost, has been provided for his advantage. This however is not always done, and as a consequence numerous notices have had to be served for the repair of water-closets, and the substitution of new ashpails for those which, often from careless or improper usage, have been rendered unfit for service.

The common Lodging-houses have received regular attention, and though many of them are not well adapted for the purpose to which they are put, they have been kept in good order, and advantage has been taken of any change of ownership or tenancy to secure desirable improvements.

The number of vans and tents which pass through the town is not large and as a rule the period of their stay is short The Whitsuntide holidays bring a large accession of show-people to the Fair ground, and though the living vans are as a rule kept in an exceedingly clean and tidy condition, there is a large retinue of hangers-on employed in putting up and taking down the various structures, who sleep in common Lodging-houses, or on the Fair ground, and who form a dangerous factor in the introduction of infectious disease. For this reason a careful inspection is made of each van, its inmates and attendants, upon entrance into the town, in order that the earliest information may be obtained of any dangerous or suspicious case of illness.

For many years very little change has taken place either in the number or condition of the boats which ply upon that portion of the Canal coming within the boundaries and jurisdiction of the town. They are kept in a satisfactory condition, and any requirements of the Inspector are promptly carried out. The following report dealing with this matter, during 1912, has already in the early part of the year been forwarded to the Local Government Board:—

COUNTY BOROUGH OF PRESTON.

Canal Boats Acts, 1877 and 1884.

The following report deals with the condition of the Canal Boats coming under the Jurisdiction of this Sanitary Authority for the year ending December 31st, 1912.

Again no change has taken place during the past year in regard to these boats, 33 still remaining on the Register, 22 having been cancelled thus showing that a total of 55 has been registered.

All but two of the boats have been inspected, as have also others registered at Lancaster. One of these, the "Mary Anne," is still plying on the Carnforth portion of the Canal as last year, whilst the "David" is stationed at her owner's place outside the Borough Boundary.

Two cases of infringement of the Regulations were found consisting of a defective pump on the "Iron Duke" No. 9, and absence of a water vessel on the "Prince of Wales" No. 3, registered at Lancaster, but whose owner resides in Preston. These defects were at once remedied at the request of the Inspector. One notice served by the Lancaster Rural Sanitary Authority was investigated, and the form duly signed returned to the said authority.

No cases of Infectious Disease have been found upon the boats, nor have any such cases been notified as occurring amongst the occupants.

Two boats, the "Belle" No. 3, and "Kate" No. 24, have been laid up during the whole of the year through insufficient work.

The work of supervision has been carried out as in the past six years by Inspector Crossthwaite, in addition to his other Sanitary duties, no special remuneration being provided for this portion of his work.

The following table shows the details of occupation and inspection during the past ten years:—

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
No. of Inspections	103	105	113	111	132	129	138	123	123	108
Males in Occupation	113	140	142	146	169	162	167	150	162	153
Females in Occupation	38	64	71	59	67	78	82	81	73	60
Children in Occupation	29	53	68	33	46	79	87	81	75	50

All the other details are shown on the attached Statistical Supplement.

H. O. Pilkington,

Medical Officer of Health.

Just as the condition of a man's house affects his health, so it is equally important that the factory or workshop in which so many of his working hours are spent should be kept in a sanitary condition. In this respect, great improvements have during recent years been effected. These workplaces are now better lighted, better ventilated, less crowded, and altogether in a more satisfactory condition, whilst the closet accommodation has been brought to a state more in accordance with the requirements of modern sanitation. This is with regard to existing buildings, whilst in the case of new structures every care is taken to see that they comply with the requirements laid down by the Factory and Workshops' Act and other Acts relating to Public Health. A summary of the work done in this direction is given on Table No. 10, whilst No. 11 gives a list of the various trades and occupations entered on the Register. Table No. 5a also refers to the same subject, the matter therein contained being given on the special form required by Government.

The question of the milk supply is always an important one, and is at present especially engaging the public attention and forming the subject for prospective legislation in the near future. Such shippons as are situated in the town have regularly and frequently been visited, and they have, on the whole, been maintained in a satisfactory condition. Except that they are of necessity in more confined situations, they will, as a rule, favourably compare with those situated in the rural districts surrounding the town.

But while the condition of the shippon is important, it is in the process of milking, and of handling and distribution, that the milk becomes a receptacle for dirt, and it is in connection with these matters that more stringent legislation is required. Too often, through want of care, the milk becomes further contaminated after being delivered at the house of the consumer, but it is very desirable that it should be so delivered, unadulterated, and free from all filthy and noxious impurities.

Such private slaughterhouses as remain in the town have been regularly visited; whilst the Cattle Market, and the Public Abattoir in connection with it, have been frequently and systematically inspected.

All the meat killed in the town has thus come under examination, with the result that 135,233 lbs have been condemned and afterwards destroyed. All the meat in question was voluntarily submitted to the Inspector's decision, and therefore in no instance was condemnation followed by a prosecution. A large proportion of the meat was taken at the Abattoir, and the remainder at one or two of the private slaughterhouses, where cattle of doubtful quality are received, notification of all such cases being forwarded to the Health Office.

The Tuberculosis (Animals) Order of 1912, will probably have the effect of greatly reducing the number of carcases dealt with in the town, since the diseased or emaciated animals will in future be notified in the districts in which they are kept, and will there be subsequently dealt with.

In addition to the large amount of meat already mentioned, fish to the weight of 10,324 lbs was examined, condemned, and afterwards destroyed. Almost the whole of this was taken at the wholesale Market, situated at the Railway Station, where the fish is examined upon arrival, by the Inspector, who deals with such as appears unfit for human consumption. In every instance of condemnation, an order was signed by the owner, or person in possession, authorising destruction.

The work of testing house drains is an important one, and was carried out in 319 instances. In some cases it follows upon the examination of a house in which a case of infectious disease has been reported, and where there is reason to suspect the drainage is not in a satisfactory condition. In others it is the result of an application from some householder who is dissatisfied with his drains, or who is about to enter upon fresh premises and wishes to be assured that they are in a sanitary condition. While such applications are encouraged, and will always receive attention, it must be understood that the work of opening up a drain, and applying the smoke test, is often a long and expensive procedure, and will not be undertaken unless a careful preliminary examination has shown that there is probably some hidden defect which cannot be otherwise demonstrated and put right.

Houses to the number of 1,173 were disinfected with sulphur or formalin, after cases of recovery or death from some form of infectious disease, and the formalin spray was used in 62 instances, for minor causes, or where from some reason, complete disinfection was inadvisable or impossible. Disinfection was also carried out in the case of 48 Schools, and 30 places of amusement, the latter being chiefly Picture Shows, which by bringing together a large number of young children in a confined space, may be regarded as a probable factor in the spread of infection.

The duty of assisting in the removal of patients to the Isolation Hospital, though not specially shown in the Summary of Work, is one which has made considerable inroads upon the Inspectors' time, and has not unfrequently led to working beyond the limits of regular hours.

Smoke observations to the number of 404 have been taken, and copies of the results have been forwarded to the different mill-owners and manufacturers. Improvement has often followed, especially in those cases where the excessive emission of black smoke has been caused by careless firing, but continual attention is required, otherwise there is a tendency to revert to the conditions found at the time of first inspection.

Under the Food and Drugs Adulteration Act, 303 samples were purchased, and forwarded to the Public Analyst for examination. Of these, 226 were purchased with the formalities required if the purchase is to be followed by prosecution. The milk samples numbered 53, and of these, 48 were returned as genuine, whilst 5 either contained added water, or had been deprived of some portion of the butter fat. In one case, prosecution resulted in a fine of 40/- and costs, in another the case was dismissed, owing to a doubt as to the identity of the person selling, whilst in the remaining cases, where the percentage of abstracted fat was not very large, a cautionary letter to the vendor was considered sufficient to meet all requirements. In the genuine samples the amount of fat was so uniformly high, as to raise grave doubts as to those in which it fell below the recognised standard of 3 per cent.

In a sample of Preserved Peas, Copper to the equivalent of 4.3 grains of crystallized Sulphate of Copper, per pound, was found to have been added, and the vendor was cautioned.

Of the samples taken informally, 69 were returned as of genuine or satisfactory quality and 8 as being defective. The information thus obtained was of service, as indicating those shops from which further samples should be purchased in the future.

Under the Contagious Diseases (Animals) Act, 1878, 3 cases of Anthrax were reported. These occurred at different times of the year, had no connection with each other, and were not followed by any further outbreak. There were 5 cases of Parasitic

Mange, each confined to a single animal; and one of Sheep Scab, in which a flock of 122 were all affected, the remaining 8 healthy animals being slaughtered by the owner.

From Table No. 12, which summarizes the work of the four Health Visitors during the year, it will be seen that a great deal of their time has been devoted to visiting those houses in which a birth has recently been notified.

In this way the whole of the births have been visited, with the exception of about 124 cases, in which special circumstances rendered their assistance unnecessary. The condition of the house at the time, the manner in which the infant was fed, and the occupation of the mother are all enquired into and tabulated.

A close relationship has always been maintained between the Education Office and the Public Health Department, and cases of infectious diseases occurring amongst the school children are at once notified by the head teachers.

The cases included in the Schedule of Diseases requiring compulsory notification are dealt with by the Inspectors upon the Certificate of the Medical Attendant, but the others—Measles, Whooping Cough, Mumps, Chicken Pox, etc.,—come under the supervision of the Health Visitors and form a considerable item of their work.

Fortunately, owing to the small amount of Summer Diarrhœa, the task of visiting the cases of this disease has been unusually light, but as a matter of precaution immediately before the expected advent of the hot weather, revisits have been made to births recently occurring in the poorer parts of the town, or in households where advice and assistance seem to be specially required, in order that the mother may be encouraged to continue the right system of feeding, or may be helped should sickness already have occurred. Another duty of the Visitor is that of enforcing greater cleanliness with regard to the condition of the heads of the children attending the various schools. This necessitates an inspection made at the school, and in certain instances one or more visits to the home of the child, in order to see that efforts are being made to render the child fit for re-admission. This work is practically never-ending, since, although the school inspection is followed for a time by good results, there is in many cases a tendency to fall back into the original condition, discovered at the time of examination. It is surprising that, where remedy or prevention is so easy, so many children should be allowed to fall into a condition, disgusting to others, and hurtful to themselves, since not only sores but a general low state of health is often the result of the constant irritation. It is to be hoped that better education, by instilling a feeling of self respect into the child, will have a beneficial effect in this direction.

The two following Tables give further information as to the cases reported from the Schools, Table A giving particulars of the different diseases at each of the respective Schools, and B the total number of each form of disease, and the ages of the children affected.

TABLE A.

	Scarlet Fever.	Measles	Whooping Cough.	Diphtheria.	Phthisis	Chicken Pox.	Mumps.	Ringw'rm Eczema, Sore Eyes, Heads, &c.
Parish Church	6	16	5	...	...	14	3	15
St. James	7	8	5	...	...	1	1	...
St. Augustine's	4	53	12	1	...	6	4	31
St. Saviour's	1	28	1	6	...	2	2	13
Grimshaw Street British	4	31	1	1	...	14	2	4
St. Stephen's	...	8	32	2	...	5	...	12
Christ Church	5	10	1	1	...	...	1	4
Hincksman Memorial	4	34	3	1	...	4	...	3
St. Mary's R.C.	9	47	15	...	...	18	...	34
St. Wilfrid's	...	10	6	...	...	...	...	8
St. Michael's	2	15	3	1	...	2	...	...
Sacred Heart	3	38	10	...	...	1	3	15
Ashton Wesleyan	...	38	1	5	1	13	4	17
St. Andrew's	6	33	33	6	...	4	1	27
Roebuck Street Council	4	44	27	9	...	33	7	46
St. Walburge's	8	52	11	1	...	2	1	12
St. Mark's	7	21	15	4	...	1	1	13
St. Peter's	1	56	9	1	...	16	...	28
Emmanuel	...	12	5	1	...	3	1	12
Plungington Road National	...	...	1	...	...	...	...	1
Eldon Street Council	1	5	10	...	...	2	28	11
Moor Park Wesleyan	1	37	7	...	...	2	2	8
English Martyrs' Elementary	5	128	31	...	...	5	7	15
English Martyrs' H.G.	...	...	...	...	...	...	...	...
St. Jude's, Kent Street	1	35	3	1	...	6	4	10
Park Secondary	...	2	...	...	...	...	...	1
Deepdale Council	...	15	13	2	...	1	...	...
St. Paul's	2	43	5	1	...	10	2	9
St. Ignatius' Elementary	9	101	6	2	...	5	...	26
St. Ignatius' H.G.	...	13	13	2	...	3	4	12
St. Thomas'	...	52	9	...	...	4	...	12
All Saints'	2	41	...	1	...	1	1	1
Holy Trinity	...	25	1	...	...	...	1	8
Orchard U.M.F.C.	3	17	1	...	...	...	...	3
St. Luke's	10	68	15	...	...	30	...	14
St. Joseph's	29	81	11	3	...	18	...	22
St. Matthew's	11	63	6	2	...	19	1	17
St. Matthew's Branch	...	...	...	...	...	18	...	3
Tennyson Road	1	1	6	2	...	6	...	10
St. Mary's National	1	63	23	1	...	4	..	8
St. Mary's Street Wesleyan	3	5	3	2	...	19	1	3

TABLE B.

	0—3	3—4	4—5	5—6	6—7	7—8	8—9	9—10	10—	Total.
Scarlet Fever	...	2	16	25	22	18	27	18	22	150
Measles	18	140	298	239	267	133	62	38	54	1249
Whooping Cough ...	...	20	54	122	83	34	17	14	15	359
Diphtheria	1	1	3	19	19	11	5	...	...	59
Phthisis	...	...	...	...	...	...	...	...	1	1
Chicken Pox	...	20	36	97	64	37	15	11	12	292
Mumps	...	4	10	19	13	7	9	7	13	82
Ringworm, Eczema, Sore Eyes, Heads, &c	...	17	67	89	87	45	56	55	72	488

In the course of their duty the Health Visitors have continued to distribute the cards dealing with the Feeding and Management of Infants and young Children, and in this way, 2,600 of such cards have, during the year, found their way into different households. The crusade has also been continued against the Tube Feeding Bottle, and though the number now found in use is less than in former years, the fact that 193 have been so found, shows how difficult it is to eradicate a long established custom, no matter how glaring its defects may be, or how evident to anyone who gives the matter a moment's consideration.

Systematic and well organised scavenging has a great effect not only upon the appearance of a town, but also—and this is the more important matter—upon the health of the towns people. Frequent and regular removal, from house and street, of all refuse matters, especially those of organic nature liable to decay and putrefaction, and their subsequent prompt and complete destruction is the great point to be aimed at, and the possibility of making any monetary profit out of the process of destruction becomes one of very secondary importance.

During the twelve months, refuse of all kinds amounting to 27,941 tons in weight was removed to the Public Destructors and there burnt, the resulting heat being utilised for the production of the steam required for the working of the Corporation's Electric Tram system.

Much has yet to be learnt with regard to effective street scavenging, so as to do away, for one thing, with the clouds of dust, which in dry, windy weather too often accompany the process, but the steady increase in motor traffic will at least have one good effect by reducing the amount of manure deposited upon the roads. The better paved and more impervious these roads are, the more easily and efficiently they can be kept clean, and, though much yet remains to be done in the town, considerable progress has, in this direction, recently been made.

I am indebted to the Borough Surveyor for the following statement showing the amount of sett-paving and flagging carried out in the public streets during the past year.

New Sett-Paving	28,421	square yards.
New Flagging	18,070	,,

Work of this kind, besides improving the appearance of a town and the health of the inhabitants, has a good effect by affording inducements for greater cleanliness on the part of those householders whose dwellings abut upon the streets so treated.

Where the streets, and especially the footpaths, are defective and ill paved, there is a liability for dust to be blown, and dirt to be carried, into the houses, and a feeling of indifference is engendered which spreads and shows itself over the whole neighbourhood. But when the external conditions are rendered satisfactory, the improvement is generally followed by a similar improvement in the appearance of the dwellings, since the tenants now recognize that their efforts towards cleanliness are more likely to be followed by a successful result.

Amongst other work carried out in the Surveyor's Department, has been the re-laying of a number of sewers which upon examination, were found to be in a defective and unsatisfactory condition.

Although in a manufacturing town it is generally understood that beauty of appearance must be secondary to utility and business purposes, still there is no good reason why the first should be entirely sacrificed; and it is possible to demonstrate that a town presenting attractive features may still be one of commercial prosperity.

Preston is well supplied with parks and open spaces, and an important addition —the Haslam Park—has recently been made through the generous gift of a lady after whom it is named; and these in natural and acquired beauty need not fear comparison with the best observable in other towns.

The main streets of the town, because they are old, present a varied and picturesque appearance, contrasting very favourably with the hideous mathematical regularity which forms the chief feature of many more modern towns.

During the year a praiseworthy attempt has been made to improve the appearance of some of the main thoroughfares, and open spaces in the middle of the town, by the planting of a number of quick growing trees which will not only furnish grateful shelter, but, by their pleasing form and colour, will offer welcome relief to the tired eyes of many busy workers. Such improvements by softening the conditions of daily life have an effect—indirect perhaps, but none the less beneficial—upon the health of the community.

I had again the privilege of attending the Annual Congress of the Royal Sanitary Institute, held in July, 1912, in the city of York.

The attendance was good, and there were a number of papers and discussions of great interest to Health officials, and all engaged in the work of sanitation. The subject of Tuberculosis, in view of the provisions of the Insurance Act, naturally claimed a large amount of attention, and a good deal could be learnt, not only from the experience of those who had to a certain extent already dealt with the subject, but also from a consideration of the peculiar difficulties with which various Sanitary Authorities found themselves confronted.

H. O. PILKINGTON,

August 26th, 1913.
Medical Officer of Health.

THE ISOLATION HOSPITAL.

Although the number of patients under treatment naturally varied according to the amount of infectious disease present in the town, the Hospital continued in full occupation throughout the year.

This was especially the case as regards Scarlet fever, the continued prevalence of which caused the accommodation for this disease to be on several occasions strained to its utmost capacity. Typhoid fever on the contrary was, as already shown, comparatively rare, and the beds in this block were at no time fully occupied.

The increased amount of Diphtheria resulted in a large number of admissions, but the accommodation was at all times equal to the demands for admission.

The following Table shows the number of patients in hospital at the beginning and end of the year, the admissions during this period, and the results, i.e., the number of recoveries and deaths:—

TABLE A.

Disease.	In Hospital Dec. 31, 1911.	Admissions.	Recoveries.	Deaths.	In Hospital Dec. 31, 1912.
Typhoid Fever	3	18	19	2	...
Scarlet Fever	22	289	274	15	22
Diphtheria	10	115	105	17	3

The next Table shows the percentage of deaths to cases treated; a comparison being made between the results occurring amongst hospital patients and those remaining at home.

TABLE B.

Mortality from Typhoid Fever, Scarlet Fever and Diphtheria—in Isolation Hospital and at Home.

CASE RATE.

	Typhoid Fever.	Scarlet Fever.	Diphtheria.
Hospital Rate ...	11.1 per cent.	5.2 per cent.	14.7 per cent.
Home Rate	20.7 per cent.	7.0 per cent.	18.0 per cent.

Of the deaths in hospital several occurred within a very short period—sometimes only a few hours—after the patient's admission. It was amongst young children suffering from Diphtheria that this was chiefly found.

Of the two deaths occurring in the Typhoid block one was that of a man who was admitted with Pneumonia, from which he died shortly afterwards.

Several children admitted into the Diphtheria Wards with bad throats, developed in the course of a day or so the rash of Scarlet fever, and were transferred to the Scarlet fever block. In some instances there was every appearance of a mixed infection, the illness presenting the characteristic symptoms of both diseases. One child recently discharged after a severe attack of Diphtheria returned with Scarlet fever from which it eventually succumbed. A nurse contracted Scarlet fever in the discharge of her duties, and after a fairly severe illness made a good recovery. In the case of three children suffering from Diphtheria, Trachœotomy was performed, in two instances before, and in the other after, admission to hospital. All did well and were discharged in good health.

A child, admitted with Scarlet fever, some days afterwards developed Chicken Pox, and was the means of spreading the infection to other patients. This complication naturally occasioned some anxiety, and was the cause of a good deal of additional trouble and extra nursing.

The number of fresh patients treated during the year was, as already stated, 422; and the average length of residence about six weeks.

The following statements give full particulars as to the maintenance of the hospital, showing the total cost for the year, the cost during each of the months, and the various items which go to make up the expenditure. A comparison is also made with the expenditure of each year since the erection of the hospital. Considering the general increase in the price of provisions, it speaks well for the economy practised in the management of the institution that the cost of food per person has been less than that of any previous year.

Maintenance, 1912, and Previous Years.

Year.		£	s.	d.
1912	Cost of Food (Patients and Staff)	679	17	0
1911	,, ,, ,, ,, ...	691	7	7
1910	,, ,, ,, ,, ...	671	16	3
1909	,, ,, ,, ,, ...	581	5	4
1908	,, ,, ,, ,, ...	562	19	8

		£	s.	d.
1912	*Cost of Drugs, Dressings, &c.	93	13	9
1911	,, ,, ,, ,,	99	10	0
1910	,, ,, ,, ,,	46	13	8
1909	,, ,, ,, ,,	38	15	0
1908	,, ,, ,, ,,	50	2	0
1912	Cost of Coal and Slack	213	3	10
1911	,, ,, ,,	230	8	11
1910	,, ,, ,,	222	3	0
1909	,, ,, ,,	212	0	0
1908	,, ,, ,,	212	12	5
1912	Salaries	476	14	5
1911	,,	492	15	5
1910	,,	483	5	0
1909	,,	476	10	1
1908	,,	435	5	5

* Includes £16 for Anti-Diphtheria Serum supplied to Medical Practitioners.

Cost of Food at the rate of:—

		Per Week.		Per annum.		
Year	Per Day.	s.	d.	£	s.	d.
1912	6¼d. per person	3	7¾	9	9	8
1911	7d. ,, ,,	4	1	10	12	4
1910	9¼d. ,, ,,	5	4¾	14	0	7
1909	8d. ,, ,,	4	8	12	12	8
1908	9¾d. ,, ,,	5	8	14	14	8

Average number of patients per day, 48.
Average number of days in hospital per patient, 41.9.
Average total daily cost (based on total expenditure), £6 16s. 0d.
Average total cost per patient ,, ,, £5 17s. 7d.

Year.		
1912	Number of Patients	422
1911	,, ,,	439
1910	,, ,,	303
1909	,, ,,	220
1908	,, ,,	153

Total Expenditure.—Year 1912:—

	£	s.	d.
January	243	5	9
February	169	17	9
March	153	18	4
April	185	0	8
May	129	5	3
June	139	16	0
July	*370	12	2
August	208	3	9
September	125	18	3
October	238	9	8
November	**351	11	11
December	165	15	3
	£2,481	14	9

*Includes £220 16s. 8d. for Borough and Poor Rates.

**Includes £140 17s. 8d. for painting, and £56 6s. 4d. for ground rent.

Year.		£	s.	d.
1911	Total Expenditure	2414	16	11
1910	,, ,,	2181	8	10
1909	,, ,,	2046	12	9
1908	,, ,,	2384	7	8

Increased expenditure was due to:—

(1) Large number of patients received during 1912.

(2) Decorating Administrative Block .... £140 17s. 8d.

(3) Re-building Wall .... £26 11s. 0d.

Sums paid to other departments during the year 1912:—

	£	s.	d.
Rates Department, for Rates	220	16	8
Water Department, for Water	58	19	4
Tramways Department, for Current, Lamps	48	3	4
Estate Committee, for Ground Rent	56	6	4
	£384	5	8

Year.		£	s.	d.
1911	Sums paid to other Departments	372	5	5
1910	,, ,, ,, ,,	378	14	5
1909	,, ,, ,, ,,	367	11	10
1908	,, ,, ,, ,,	355	6	8

The administrative block had remained internally undecorated since the time of erection, but towards the close of the past year it was thoroughly painted.

The ornamental wall at the South side of the main entrance to the grounds had for some time shown signs of a serious subsidence, and was therefore rebuilt.

With the course of time, and owing to the growth of creeping plants, the Hospital, especially the administrative block, has greatly improved in appearance. The garden and grounds have been kept in good condition and well stocked with shrubs and flowers, and the appearance of the Institution is such as to attract the admiring attention of anyone passing. Partly no doubt as a consequence of these pleasing conditions, a considerable amount of building has gone on in the immediate neighbourhood, and the houses, as soon as built, have been occupied. This is often the case with an Isolation Hospital, and goes far to disprove the sincerity of the objections so often raised at the time of its proposed erection by residents in the neighbourhood.

Of the value of such an institution there can be little question, since it affords gratuitous medical treatment and skilled nursing to all classes, it removes from a household the source of infection which might prevent the bread winners from following their employment, and it does away with that danger of spreading infection which must be associated with a case of fever nursed under the ordinary conditions of a cottage home. Another advantage, though one perhaps not so plainly apparent, is that cases nursed in hospital are less likely to be affected with any of the complications which not unfrequently follow upon attacks of infectious disease, or, if so affected, treatment is at once adopted and the patient very likely saved from some chronic trouble which might have a bad effect upon the whole of his future life.

I again refer with pleasure to the skill and zealous interest of the Matron in the management of the Hospital, and to the support received from the whole of the staff in carrying out the varied duties connected with such an institution, duties at all times serious and responsible, and not unattended with a certain element of personal risk.

H. O. PILKINGTON,

August 26th, 1913.

Medical Superintendent.

PORT SANITARY.

The vessels frequenting this Port, and the nature of the trade carried on, have been much the same as in former years, and therefore there is little of anything new in the work of sanitary inspection. Whilst the number of steamers examined is rather larger than formerly, there has been a slight falling off as regards the sailing vessels. The defects found were of the usual character, and were remedied upon the verbal representation of the Inspector.

Under the Unsound Food Regulations, 1908, a large amount of food stuffs, tinned or otherwise packed, have been examined. The principal article dealt with was about 7½ tons of sugar, which had been damaged by contact with salt water. This was rejected and sent back to the consignor to undergo a process of re-manufacture.

Although little or no trade has been done with countries affected with Cholera, Plague, Yellow Fever, &c., a close scrutiny has been kept upon the crews of all incoming vessels with a view to detect as early as possible any case of infectious disease. Fortunately nothing of this nature was present upon any of the vessels, such cases of illness as came under observation being of an ordinary and non-infectious character. Because of their being possible agents in the introduction of Plague, as well as on account of their destructive habits, a constant warfare has been maintained against the colonies of rats which infest the shipping and warehouses of this as of all other Ports. By means of professional rat catchers, cats, virus, &c., a large number have been captured and destroyed.

The Hospital, erected some twenty years ago near the entrance to the Dock, for the purpose of treating possible cases of sea-borne Cholera—at that time prevalent in Hamburg and the neighbourhood—has been maintained in working order. It has suffered from the dilapidations inseparable from age, especially in a building which has remained so long unoccupied; and also from a certain amount of wilful damage to which its detached and isolated position renders it especially liable.

H. O. PILKINGTON,

August 26th, 1913.

Port Medical Officer.

TABLE No. 1.

Number and Causes of Deaths at different Ages, for the Year 1912.

Cause of Death.	Under 1 Year.	1 to 2	2 to 5.	5 to 15	15 to 25	25 to 45.	45 to 65	65 and over.	Total.	Corresponding year, 1911.	Corresponding year, 1910.	Corresponding year 1909.	Average for the past six years.
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever	...	...	...	2	2	1	2	1	8	20	11	25	18·80
Scarlatina	1	3	16	16	...	..	...	...	36	8	7	1	9·50
Measles	13	33	34	10	...	...	...	...	90	26	19	96	48·33
Diarrhœa	13	4	1	1	1	...	3	1	24	93	28	104	106·16
Whooping Cough	18	12	12	...	...	...	...	...	42	5	65	18	30·33
Diphtheria	...	6	20	11	...	2	...	...	39	18	12	11	17·16
Croup	...	2	5	..	...	...	...	...	7	...	4	7	5·33
Consumption	1	1	1	5	22	40	21	5	96	97	107	116	113·50
Bronchitis	56	17	7	4	2	8	42	64	200	188	237	240	231·83
Inflammation of Lungs	9	7	7	10	12	31	35	11	122	120	82	96	113·66
Teething, Premature Births and Debility.	214	21	17	7	...	.	...	...	259	365	320	366	336·66
Old Age	...	...	...	...	...	...	3	108	111	126	139	120	112·66
Violence, &c.	7	...	4	7	6	13	17	8	62	51	62	74	61·50
Other Diseases	4	3	6	17	38	117	282	234	701	641	628	701	669·00
Total	336	109	130	90	83	212	405	432	1797	1758	1721	1975	1874·42

TABLE No. 2.

Number and Causes of Death in each Month of the Year 1912.

Cause of Death.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Small Pox	...	...	...	...	...	...	...	...	...	...	...	...	...
Fever	2	1	...	...	1	1	1	1	1	...	...	...	8
Scralatina	2	1	4	3	7	4	5	2	2	1	1	4	36
Measles	2	...	...	...	...	...	...	...	1	4	28	55	90
Diarrhœa	...	...	...	1	...	2	1	4	4	10	2	...	24
Whooping Cough	3	13	7	7	4	...	2	...	2	1	2	1	42
Diphtheria	1	8	3	1	4	1	3	2	3	4	3	6	39
Croup	2	1	2	1	...	...	1	...	...	...	...	...	7
Consumption	5	11	9	7	14	2	5	9	9	11	6	8	96
Bronchitis	30	39	21	10	17	14	7	9	12	14	10	17	200
Inflammation of Lungs	19	10	12	9	12	10	10	6	2	7	13	12	122
Teething, Premature Births, and Debility	23	25	30	25	27	18	17	17	13	24	21	19	259
Old Age	21	13	15	6	6	4	7	12	5	7	10	5	111
Violence, &c.	4	4	5	5	8	3	4	6	6	6	7	4	62
Other Diseases	58	77	71	54	63	60	54	42	45	70	51	56	701
Total	172	203	179	129	163	119	117	110	105	159	154	187	1797

TABLE No. 3.

Number and Causes of Death in each Ward for the Year 1912.

Wards.	Small Pox.	Fever.	Scarlatina.	Measles.	Diarrhœa.	Whooping Cough.	Diphtheria.	Croup.	Consumption.	Bronchitis.	Inflammation of Lungs	Teething, Premature Births,& Debility.	Old Age.	Violence, &c.	Other Diseases.	Total Deaths.	Rate per 1,000 per ann.	Total Births.	Rate per 1,000 per ann.	Population.
St. John's Ward.....	...	...	1	4	5	2	4	...	5	18	16	31	11	2	44	143	12·14	271	23·00	11780
Avenham Ward......	...	...	..	1	1	2	1	1	2	6	6	14	11	3	45	93	13·00	120	16·65	7190
Christ Church Ward	...	...	...	13	3	7	...	...	4	19	8	22	4	4	45	129	15·25	216	25·52	8458
Ashton Ward.........	...	...	1	1	...	4	4	...	7	5	7	11	9	5	54	108	12·42	157	18·04	8705
Maudland Ward......	...	...	1	5	1	2	7	...	12	14	9	14	8	1	55	129	13·72	218	23·18	9402
St. Peter's Ward...	...	...	5	15	3	6	1	2	10	25	11	35	9	3	57	182	15·66	309	26·58	11624
Moor Brook Ward..	...	...	2	4	1	7	4	...	5	14	15	15	4	2	67	140	15·51	216	23·93	9025
Park Ward............	...	1	2	14	3	4	8	2	14	23	13	44	15	11	91	245	16·71	347	23·66	14663
Trinity Ward	...	1	5	16	4	3	4	...	18	23	14	23	11	3	43	168	16·53	240	23·62	10160
Deepdale Ward......	...	...	11	9	3	1	1	2	5	13	9	25	9	3	59	150	14·57	246	23·90	10290
Ribbleton Ward.....	...	3	6	5	...	2	2	...	5	18	2	11	9	3	38	104	11·66	219	24·55	8919
Fishwick Ward.......	...	2	2	3	...	2	3	...	7	12	6	10	10	...	44	101	13·62	165	22·25	7414
Goal, Infirmary, &c	...	1	...	...	...	...	...	...	2	10	6	4	1	22	59	105	...	...	...	...
Total.............	...	8	36	90	24	42	39	7	96	200	122	259	111	62	701	1797	15·28	2724	23·16	117630

Death Rate per annum, per 1,000 of Population.. 15·28
Do. Do. Do. Average for 10 years .... 16·27
Infantile Mortality (Deaths under one year per 1,000 Births) for the year 123
Do. Do. Do. Average for 10 years 159
Per centage of Deaths under one year to total deaths for the Year .... 18·70
Do. Do. Do. Average for 10 years .... 25·92

TABLE No. 4.

Number of Deaths in each Ward during each Month of 1912.

Wards	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
St. John's Ward	10	11	17	17	11	16	16	7	7	11	9	11	143
Avenham Ward	12	10	8	4	4	7	8	8	7	6	10	9	93
Christ Church Ward	7	21	10	6	9	13	9	7	7	12	15	13	129
Ashton Ward	10	13	9	6	7	7	7	7	7	16	12	7	108
Maudland Ward	12	17	7	11	12	6	9	8	12	11	13	11	129
St. Peter's Ward	17	27	24	7	12	15	13	12	9	11	15	20	182
Moor Brook Ward	13	19	13	10	11	12	3	7	10	19	8	15	140
Park Ward	21	28	22	23	28	15	14	14	14	18	20	28	245
Trinity Ward	14	16	14	13	17	9	11	10	10	10	21	24	168
Deepdale Ward	17	10	18	10	11	9	11	8	7	14	15	20	150
Ribbleton Ward	14	11	17	6	14	3	6	7	5	5	3	13	104
Fishwick Ward	16	11	12	7	12	4	5	9	5	8	2	10	101
Goal, Infirmary, &c	9	9	8	9	15	3	5	6	5	18	11	6	105
Total	172	203	179	129	163	119	117	110	105	159	154	187	1797

TABLE 1A.

Vital Statistics of Whole District during 1912 and Previous Years.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Un-correc'd Number.	Nett.						Und'r 1 yr of age		At all Ages.	
			Number.	Rate.	Number.	Rate.	of Non-resid'ts registered in the district	of Residents not regist'd in the district	Number.	Rate per 1,000 Nett Births.	Number	Rate.
1907	117,093	–	3124	26.68	2003	17·10	–	211	495	158	2214	18.90
1908	117,799	–	3309	27·56	1975	16.45	28	175	516	156	2122	17.67
1909	118,519	–	3027	25·54	1721	14·52	52	173	416	137	1842	15·54
1910	119,253	–	2812	23·58	1758	14·74	42	213	438	156	1929	16.17
1911	117,216	–	2726	23·25	1817	15·50	45	212	473	173	1984	16.92
1912	117,630	2724	2753	23.40	1797	15·28	32	207	342	124	1972	16.76

At Census of 1911.	
Total population at all ages	117,113
Number of inhabited houses	26,066
Average number of persons per house..	4·49

Area of District in acres (Land and Inland Water) 4,029

TABLE 2A.

Cases of Infectious Disease notified during the Year 1912.

NOTIFIABLE DISEASES.	NUMBER OF CASES NOTIFIED.								TOTAL CASES NOTIFIED IN EACH LOCALITY.												TOTAL CASES REMOVED TO HOSPITAL.
		At Ages—Years.																			
	At all Ages.	Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and upwards.	St. John's Ward.	Avenham Ward.	Christ Church Ward.	Ashton Ward.	Maudland Ward.	St. Peter's Ward.	Moorbrook Ward.	Park Ward.	Trinity Ward.	Deepdale Ward.	Ribbleton Ward.	Fishwick Ward.	
Small Pox	...	...	...	...	...	..	...	...	...	...	...		...	...	...	.	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Croup)	238	5	87	105	21	15	5	...	27	20	16	27	40	27	12	30	21	5	8	5	115
Erysipelas	52	1	1	5	4	15	21	5	8	1	9	4	7	2	4	7	4	...	3	3	...
Scarlet Fever	590	1	185	370	29	5	..	...	65	15	40	37	54	76	31	53	55	47	80	37	289
Typhus Fever	1	...	...	.	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	..
Enteric Fever	47	..	6	15	11	7	7	1	6	2	2	3	1	3	1	8	5	6	8	2	18
Relapsing Fever	...	...	...	..	...	...	...	...	.	...	...	...	...	...	..	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	...
Puerperal Fever	2	...	...	...	1	1	...	...	.	..	...	...	..	...	...	...	...	...	2	...	...
Cerebro-spinal Meningitis	...	...	...	...	...	...	...	.	...	...	...	...	...	..	...	...	...	...	...	...	...
Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		...	...
Pulmonary Tuberculosis	191	1	5	18	39	86	38	4	24	3	9	6	20	25	9	26	32	13	15	9	...
Totals	1121	8	284	513	105	130	71	10	130	41	76	77	122	133	57	125	117	71	116	56	422

Isolation Hospital—{ Preston Borough Isolation Hospital,
Deepdale Road.

Total available beds—56. Number of Diseases that can be concurrently treated—3.

TABLE 3A.

Causes of, and Ages at, Death during the year 1912.

CAUSES OF DEATH.	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District.
	All Ages.	Under 1 year.	1 and under 2.	2 and under 5.	5 and under 15.	15 and under 25.	25 and under 45.	45 and under 65.	65 and up-wards.	
All Causes :—										
Certified	1914	329	110	134	95	83	225	459	479	...
Uncertified	58	13	1	1	2	1	7	10	23	...
Enteric Fever	8	...	...	...	2	2	1	2	1	2
Small-pox	...	...	...	...	...	...	...	...	...	...
Measles	90	13	33	34	10	...	...	...	...	...
Scarlet Fever	36	1	3	16	16	...	...	...	...	15
Whooping Cough	42	18	12	12	...	...	...	...	...	...
Diphtheria and Membranous Croup	41	...	6	21	12	...	2	...	...	19
Influenza	27	...	...	...	1	1	3	14	8	...
Erysipelas	1	1	...	...	...	...	...	...	...	1
Phthisis (Pulmonary Tuberculosis)	120	3	2	2	4	26	53	24	6	2
Tuberculous Meningitis	9	2	1	1	4	1	...	...	...	...
Other Tuberculous Diseases	36	8	7	2	6	5	4	4	...	3
Cancer, Malignant Disease	113	...	...	...	1	...	9	59	44	8
Rheumatic Fever	8	...	...	...	1	3	...	4	...	...
Meningitis	10	4	2	3	1	...	...	...	...	2
Organic Heart Disease	175	...	...	...	5	8	32	73	57	4
Bronchitis	162	28	8	5	1	2	7	42	69	4
Pneumonia (all forms)	184	39	16	13	13	11	31	40	21	13
Other Diseases of Respiratory Organs	32	2	2	5	...	2	4	10	7	3
Diarrhœa and Enteritis	46	28	4	3	2	1	1	5	2	...
Appendicitis and Typhlitis	6	...	...	1	...	1	3	1	...	7
Cirrhosis of Liver	18	...	...	...	...	...	4	13	1	...
Alcoholism	5	...	...	...	...	...	2	3	...	...
Nephritis and Bright's Disease	49	...	2	2	2	1	7	22	13	1
Puerperal Fever	1	...	...	...	...	...	1	...	...	1
Diseases and Accidents of Pregnancy and Parturition	4	...	...	...	...	...	4	...	...	1
Congenital Debility and Malformation, including Premature Birth	152	152	...	...	...	...	...	...	...	1
Violent Deaths, excluding Suicide	46	7	...	4	5	4	11	8	7	21
Suicides	14	...	...	...	1	1	3	8	1	...
Other Defined Diseases	508	31	12	9	5	13	48	134	256	30
Diseases ill-defined or Unknown	29	6	1	2	4	2	2	3	9	1
Sub-Entries included in above figures:										
Typhus Fever	...	...	...	...	...	...	1	...	...	...

TABLE 4A.

Nett Deaths from stated Causes at various Ages under One Year of age during the Year 1912.

CAUSE OF DEATH.	Under 1 Week.	1 - 2 Weeks.	2 - 3 Weeks.	3 - 4 Weeks.	Total under 1 Month.	1 - 3 Months.	3 - 6 Months.	6 - 9 Months.	9 - 12 Months.	Total Deaths under One Year.
All Causes:—										
Certified	63	17	17	9	...	54	56	53	54	...
Uncertified	4	1	...	...	...	2	4	...	2	...
Small Pox	...	...	...	...	...	...	...	...	...	...
Chicken Pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	5	8	13
Scarlet Fever	...	...	...	...	...	...	...	...	1	1
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	...	...	...	2	5	2	9	18
Diarrhœa	...	...	2	...	2	4	9	5	4	24
Enteritis	...	2	...	...	2	2	1	...	...	5
Tuberculous Meningitis	...	...	...	...	...	...	1	1	...	2
Abdominal Tuberculosis	...	...	...	...	...	...	1	4	1	6
Other Tuberculous Diseases	...	...	...	...	...	...	1	2	1	4
Congenital Malformations	8	...	1	...	9	3	2	...	1	15
Premature Birth	48	10	5	3	66	8	...	...	1	75
Atrophy, Debility and Marasmus	5	3	5	3	16	16	11	10	7	60
Atelectasis	1	...	...	...	1	...	...	...	...	1
Injury at Birth	1	...	...	..	1	...	...	1	...	2
Erysipelas	...	...	...	...	...	1	...	...	...	1
Syphilis	...	...	1	...	1	...	2	...	...	3
Rickets	...	...	...	...	...	...	...	...	...	...
Meningitis (not Tuberculous)	...	...	...	..	...	...	2	...	...	2
Convulsions	2	1	1	1	5	6	1	2	2	16
Gastritis	...	...	...	...	...	1	...	1	...	2
Laryngitis	...	...	...	...	...	...	...	...	2	2
Bronchitis	...	1	1	...	2	9	16	14	15	56
Pneumonia (all forms)	1	...	1	1	3	...	1	3	2	9
Suffocation, overlying	...	...	...	1	1	3	...	...	...	4
Other causes	1	1	...	...	2	1	7	3	2	15
Total	67	18	17	9	111	56	60	53	56	336

Nett Births in the Year, Legitimate 2,617
" " Illegitimate 136

Nett Deaths in Year of Legitimate Infants 314
" " Illegitimate " 22

TABLE No. 5.

Birth Rate, Death Rate, and Analysis of the Zymotic Death Rate in 39 of the largest English Towns, for the Year 1912. Compiled from the Registrar-General's Returns.

NAME OF TOWN.	Estimated Population. 1912.	Birth Rate.	Recorded Death Rate.	Enteric Fever.	Small Pox.	Measles.	Scarlet Fever.	Wh'ping Cough.	Diphtheria.	Diarrhœa & Enteritis under 2 years	Deaths under 1 year to 1,000 Births.
London	4,519,754	24.7	13.5	0.03	0.00	0.39	0.03	0.21	0.10	10.53	90
Croydon	174,273	22.0	10.6	0.04	0.00	0.18	0.00	0.06	0.14	10.81	75
West Ham	291,900	29.4	14.1	0.05	0.00	0.84	0.06	0.43	0.12	10.42	104
Brighton	132,265	18.9	12.6	0.05	0.00	0.18	0.04	0.02	0.02	6.31	76
Portsmouth	236,731	23.7	12.9	0.09	0.00	0.40	0.12	0.22	0.52	8.38	82
Norwich	122,479	21.8	12.7	0.06	0.00	0.15	0.11	0.03	0.16	8.38	106
Plymouth	112,612	21.7	14.8	0.08	0.00	0.05	0.01	0.25	0.18	10.04	107
Bristol	359,432	21.4	13.3	0.01	0.01	0.43	0.02	0.19	0.13	5.68	102
Wolverhampton	95,479	25.3	13.3	0.01	0.01	0.12	0.07	0.20	0.11	7.67	87
Birmingham ...	850,947	26.1	14.0	0.03	0.00	0.67	0.18	0.39	0.11	9.00	112
Leicester	229,294	22.1	13.4	0.02	0.00	0.42	0.05	0.21	0.09	7.69	111
Nottingham....	262,574	23.7	14.4	0.05	0.00	0.62	0.09	0.27	0.10	10.66	117
Derby..........	124,544	23.5	12.1	0.01	0.00	0.06	0.02	0.14	0.10	5.16	79
Birkenhead.....	133,427	28.2	14.3	0.04	0.00	0.40	0.08	0.36	0.15	15.61	97
Liverpool	752,021	29.6	18.1	0.03	0.00	1.15	0.12	0.35	0.14	17.92	124
Bolton	182,524	22.4	13.4	0.05	0.00	0.19	0.05	0.21	0.11	6.98	98
Manchester	723,531	25.4	16.0	0.06	0.00	0.68	0.07	0.41	0.13	12.13	121
Salford	232,734	26.4	16.5	0.08	0.00	1.05	0.04	0.55	0.14	13.13	128
Oldham	148,839	23.0	16.1	0.00	0.00	0.44	0.04	0.43	0.08	10.38	116
Burnley	108,012	22.9	14.6	0.06	0.00	0.22	0.03	0.33	0.05	13.69	146
Blackburn	133,560	20.4	14.2	0.04	0.00	0.40	0.02	0.19	0.07	13.08	119
Preston.........	**117,631**	**23.3**	**16.6**	**0.07**	**0.00**	**0.78**	**0.31**	**0.38**	**0.34**	**11.47**	**122**
Huddersfield ...	109,513	18.9	13.6	0.02	0.01	0.19	0.18	0.24	0.08	4.33	96
Halifax........	101,104	18.3	14.7	0.04	0.00	0.15	0.08	0.08	0.05	2.76	81
Bradford	289,609	19.3	14.3	0.17	0.00	0.17	0.04	0.05	0.19	3.88	99
Leeds..........	447,746	23.2	14.2	0.04	0.00	0.36	0.09	0.11	0.20	9.32	101
Sheffield	466,408	27.6	14.2	0.09	0.00	0.39	0.07	0.41	0.10	9.00	106
Hull	282,988	27.7	14.4	0.12	0.00	0.52	0.00	0.09	0.08	9.75	101
Sunderland	151,832	31.4	15.8	0.03	0.00	0.44	0.01	0.28	0.14	6.05	116
Gateshead......	117,848	27.5	15.4	0.01	0.00	0.95	0.04	0.42	0.20	7.87	103
Newcastle	269,196	26.9	14.2	0.06	0.00	0.61	0.13	0.14	0.11	5.68	102
Cardiff	184,633	25.0	13.7	0.08	0.00	1.10	0.04	0.31	0.17	8.60	109
Swansea	117,328	27.6	13.3	0.01	0.00	0.61	0.05	0.28	0.28	10.19	100
Warrington	73,215	28.5	14.2	0.12	0.00	1.15	0.13	0.09	0.15	9.30	91
St. Helens	98,159	31.7	15.1	0.08	0.00	0.59	0.17	0.48	0.18	10.57	122
Stockport......	110,781	22.7	14.6	0.05	0.00	0.47	0.04	0.33	0.12	8.26	106
Middlesbrough..	106,550	31.7	17.1	0.07	0.00	1.70	0.19	0.07	0.07	7.85	126
South Shields ..	109,678	30.4	15.6	0.02	0.00	0.59	0.05	0.44	0.05	4.68	107
Northampton ..	90,467	21.4	12.0	0.02	0.00	0.51	0.01	0.13	0.13	4.20	73

TABLE No. 6.

The estimated Population, Number of Births and Deaths, Rates per thousand, and natural increase within the Borough, for each year since 1843.

Years.	Estimated Population.	No. of Deaths.	Death Rate per 1,000.	No. of Births.	Birth Rate per 1,000.	Natural Increase.
1843	54,680	1459	26.38	1975	36.12	516
1844	56,520	1380	24.42	2200	38.92	820
1845	58,360	1635	28.01	2293	39.29	558
1846	60,230	2189	36.36	2475	41.09	286
1847	62,050	2059	33.18	2268	36.59	209
1848	63,900	1550	24.26	2223	34.79	673
1849	65,759	1751	26.63	2403	36.55	652
1850	67,000	1745	25.81	2649	39.19	904
1851	69,450	2241	32.26	2803	40.36	562
1852	70,850	2284	32.23	2998	42.31	714
1853	72,250	2346	32.47	3072	42.51	726
1854	73,600	2013	27.35	3037	41.26	1024
1855	75,000	2557	34.10	3071	40.95	514
1856	76,400	2251	29.46	3151	41.24	900
1857	77,800	2131	27.39	3286	42.24	1155
1858	79,200	2545	32.13	3082	38.91	537
1859	80,600	2111	26.19	3399	42.17	1288
1860	82,000	2236	27.27	3381	41.23	1145
1861	82,985	2585	31.15	3626	43.69	1041
1862	83,231	2411	28.97	3522	42.32	1111
1863	83,477	2142	25.66	3388	40.57	1246
1864	83,686	2432	29.06	3422	40.89	990
1865	83,932	2708	32.26	3338	39.77	630
1866	84,178	2854	33.90	3535	41.99	681
1867	84,424	2608	30.89	3732	44.20	1124
1868	84,670	2798	33.04	3710	43.82	912
1869	84,916	2248	26.47	3434	40.44	1186
1870	85,162	2406	28.25	3486	40.93	1080
1871	85,427	2541	29.75	3438	40.24	897
1872	85,654	2294	26.78	3704	43.24	1410
1873	86,000	2899	33.71	3558	41.37	659
1874	86,000	2962	34.44	3582	41.65	620
1875	86,000	2581	30.01	3499	40.68	918
1876	86,600	2331	26.92	3623	41.84	1292
1877	87,000	2336	26.85	3601	41.39	1265
1878	87,300	2502	28.66	3697	42.35	1195
1879	87,600	2395	27.34	3403	38.83	1068
1880	88,000	2425	27.35	3475	39.49	1050
1881	96,524	2044	21.17	3489	36.14	1445
1882	97,656	2511	25.71	3785	38.76	1214
1883	98,564	2345	23.79	3576	36.28	1231
1884	99,481	2540	25.53	3745	37.64	1205
1885	100,406	2563	25.52	3868	38.52	1305
1886	101,340	2769	27.32	3961	39.08	1192
1887	102,283	2703	26.42	3870	37.83	1167
1888	103,234	2326	22.53	3823	37.03	1497
1889	104,194	2019	28.97	3912	37.63	902
1890	105,163	2726	25.92	3718	35.35	992
1891	107,864	2807	26.02	3830	35.50	1023
1892	109,038	2481	22.75	3686	33.80	1205
1893	110,225	2753	24.97	3809	34.55	1056
1894	111,425	2186	19.61	3545	31.81	1359
1895	112,638	2528	22.44	3702	32.95	1174
1896	113,864	2191	19.24	3673	32.25	1482
1897	115,103	2687	23.34	3687	32.03	1000
1898	116,356	2107	18.10	3559	30.58	1452
1899	117,622	2492	21.18	3492	29.68	1000
1900	118,902	2636	22.16	3410	28.67	774
1901	113,117	2213	19.56	3418	30.21	1205
1902	113,766	1998	17.56	3278	28.81	1280
1903	114,404	1955	17.08	3453	30.18	1498
1904	115,055	2091	17.83	3314	28.26	1223
1905	115,721	1906	16.47	3259	28.16	1353
1906	116,399	2065	17.74	3317	28.49	1252
1907	117,093	2003	17.10	3124	26.68	1121
1908	117,799	1975	16.45	3309	27.56	1334
1909	118,519	1721	14.52	3027	25.54	1306
1910	119,253	1758	14.74	2812	23.58	1054
1911	117,216	1817	15.50	2726	23.25	909
1912	117,630	1797	15.28	2724	23.16	927

TABLE No. 7.

Per centage of Deaths from Zymotic Diseases to Sickness reported during the Year 1912.

Disease.	No. of Cases Reported.	No. of Deaths.	Per centage.
Small Pox	..	...	...
Typhus Fever	1	1	~~1·00~~ 100.
Typhoid Fever	47	8	17·00
Scarlet Fever	590	36	6·10
Diphtheria	238	39	16·40
Puerperal Fever	2	1	50·00
Erysipelas	52	1	1·90

TABLE No. 8.

Meteorological Observations for the Year 1912.

Month.	Attached Thermometer.	Barometer.	Barometercorrected to 32 deg. Fahr.	Hygrometer		Temperature in Shade.		Earth Thermometer		Mean Daily Temperature.	Humidity Saturation=100.	Rainfall in inches.
				Dry Bulb.	Wet Bulb.	Maxi-mum	Mini-mum	One Foot.	Four Feet.			
January	36·8	29·783	29·912	41·8	40·9	41·8	34·4	...	44·2	38·0	92	2·94
February	42·2	29·502	29·611	44·7	43·7	47·0	38·8	...	41·3	42·9	93	2·26
March	44·5	29·510	29·613	44·9	43·4	48·6	39·9	...	44·0	44·3	88	5·01
April	48·5	30·035	30·126	50·9	46·9	55·8	41·7	...	44·9	48·7	75	0·59
May	53·9	29·919	29·992	54·7	50·6	58·9	45·3	...	48·5	52·1	74	2·52
June	57·0	29·702	29·764	58·9	55·1	63·2	51·7	...	51·5	57·4	79	6·52
July	61·2	29·837	29·890	61·7	57·5	68·8	54·5	...	55·2	61·6	75	6·25
August	56·5	29·603	29·670	56·9	54·5	60·3	50·9	...	54·8	55·6	84	5·10
September	52·3	30·151	30·231	53·5	50·1	57·1	47·0	...	53·0	52·0	79	1·34
October	47·1	29·800	29·894	48·7	46·5	53·1	42·2	...	...	47·7	83	4·49
November	44·2	29·805	29·908	45·0	43·7	47·8	41·2	...	...	44·5	88	2·70
December	43·2	29·629	29·735	44·8	43·4	48·5	39·4	...	...	44·0	89	3·44

TABLE No. 9.

SANITARY INSPECTORS.

Summary of Work done during the Year 1912.

	No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Number of Animals removed	85	99	...	4	188
Number of Complaints received	301	1005	283	312	1,901
Inspections of Dwelling Houses	4068	1812	3200	3495	12,575
,, Infected Houses	498	417	281	273	1,469
,, Lodging Houses	18	1238	100	2910	4,266
,, Cellar Dwellings	...	...	57	35	92
,, Canal Boats	...	...	...	108	108
,, Vans and Tents	24	73	31	58	186
,, Schools	35	3	22	29	89
,, Cowsheds, Dairies and Milkshops	120	18	152	299	590
,, Slaughter Houses	60	...	116	80	262
,, Markets	...	139	48	1027	1,214
,, Drains and Yards	2406	2066	3116	4018	11,606
Re-Inspections	1408	69	129	2904	4,510
Smoke Observations	128	118	122	136	404
Circular Letters sent	321	127	111	140	699
Notices served for Defective Slopstone Pipes	24	52	89	16	181
,, ,, Drains	176	162	173	210	721
,, ,, Spouts	48	30	95	36	209
,, ,, Water Closets	185	128	153	136	602
,, ,, Water Closet Doors	4	...	...	...	4
,, ,, Yard Pavement	22	65	3	21	111
,, ,, Cowsheds	4	...	...	...	4
,, Overcrowding	4	...	1	1	6
,, Limewashing	54	53	117	59	283
,, Manure Accumulation	8	2	12	40	62
,, Stagnant Water	...	...	...	1	1
,, General Nuisances	101	92	62	195	450
Notices served to Flag Yards	21	13	2	88	124
,, Flag Lobbies	8	20	4	12	44
,, Convert Privies into W.C's.	4	...	1	4	9
,, Supply Ashpails	56	60	4	43	163
House Drains Tested	66	119	24	110	319
Number of Houses Fumigated	251	336	334	252	1,173
,, Sprayed	7	21	28	6	62
Number of Schools Disinfected	9	10	16	13	48
Number of Places of Amusement Disinfected	4	16	6	4	30
Parcels of Bedding Disinfected	6	12	6	9	33
Number of School Drains Tested	...	...	...	9	9
,, Ashpails cleansed	...	...	...	...	1,734,035
,, Ashpits ,,	...	...	...	...	520
Fish Condemned and Destroyed	...	...	{ Wet Dry	10120lbs. 204 ,,	} 10,324 lbs.
Visits under Shops Act, 1912	643	657	663	750	2713

TABLE No. 5A.

Factories, Workshops, Workplaces and Home-Work.

1.—INSPECTION.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	127	6	...
Workshops (including Workshop Laundries)	2438		...
Workplaces (other than Outworkers' premises included in Part 3 of this Report)	90		...
Total	2655	6	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector	
Nuisances under the Public Health Acts :—				
Want of Cleanliness	37	37		
Want of Ventilation	...	...		
Overcrowding	...	...		
Want of drainage of floors	30	30		
Other Nuisances	38	38		
Sanitary accommodation insufficient	8	7		
unsuitable or defective	64	60		
not separate for sexes	...	...		
Offences under the Factory and Workshop Act :—				
Illegal occupation of underground bakehouse (s. 101)	...	...		
Breach of special Sanitary requirements for bakehouses (s.s. 97 to 100)	...	...		
Other offences (excluding offences relating to outwork which are included in Part 3 of this Report)	...	...		
Total	177	172		

3.—HOME WORK.

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.									OUTWORK IN UNWHOLESOME PREMISES. SECTION 108.			OUTWORK IN INFECTED PREMISES. SECTIONS 109, 110.		
	Lists received from Employers.						Notices served on Occupiers as to keeping or sending Lists.	Prosecutions.		Instances.	Notices served.	Prosecutions	Instances.	Orders made (S. 110).	Prosecutions (Sections 109, 110).
	Twice in the Year.			Once in the Year.				Failing to keep or permit Inspection of Lists.	Failing to send Lists.						
	Lists	Outworkers.		Lists.	Outworkers.										
		Con-tractors.	Work-men.		Con-tractors.	Work-men.									
Wearing Apparel:—															
(1) making, &c.	28	6	59	6	...	10	...	...	...	...	...	...	...	...	...
(2) cleaning and washing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	56	12	118	6	...	10	...	...	...	...	...	...	...	...	...

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.	Number.
Factories	121
Workshops	856
Workplaces	85
Retail Bakehouses	144
Public do.	19
Total number of Workshops on Register	1225

5.—OTHER MATTERS.

Class.		Number.
Matters notified to H.M. Inspector of Factories:—		
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ...		...
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5).	Notified by H.M. Inspector	44
	Reports (of action taken) sent to H.M. Inspector...	44
Other		133
Underground Bakehouses (s. 101):—		
Certificates granted during the year		...
In use at the end of the year		3

TABLE No. 10.

Summary of Work done under the Factory and Workshop Act during the Year 1912.

	No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Number of Factories and Workshops on Register...	211	422	167	425	1225
,, Circular Letters sent re Out-workers...	3	39	2	36	80
,, Out-workers reported	3	70	2	58	133
Visits to Factories and Workshops	421	391	416	586	1814
,, Retail Bakehouses	93	281	61	174	609
,, Public Bakehouses	58	40	20	114	232
,, Home-workers premises	8	25	16	64	113
Drains tested	1	...	...	10	11
Defects found and Remedied:—					
Defective Drains	6	1	6	17	30
,, Spouts and Roofs	4	...	...	2	6
,, Water Closets	28	1	22	13	64
Limewashing required	10	6	6	15	37
General Nuisances	6	3	6	9	24
Insufficient W.C. accommodation for Females	...	...	...	4	4
,, ,, Males	3	...	...	1	4
No receptacle for Refuse	...	..	...	1	1
Manure Accumulations	4	...	...	3	7
Various	...	...	...	...	...

TABLE No. 11.

List of Factories and Workshops on Register during the Year 1912.

		No. 1 District.	No. 2 District.	No. 3 District.	No. 4 District.	Total.
Bakers and Confectioners (Retail)		36	49	17	42	144
Bakers (Public)		3	7	4	5	19
Basket Makers		...	2	2	1	5
Beer Bottlers		3	2	1	6	12
Biscuit Makers		...	4	1	...	5
Boot, Shoe and Clog Makers, Leather Curriers		24	56	22	32	134
Brass Founders		...	2	2	2	6
Breweries		1	4	2	3	10
Brush Makers		1	1	...	2	4
Cabinet Makers, Wood Carvers, Upholsterers		4	11	3	20	38
Coach Builders		1	5	...	5	11
Cotton Waste Cleaners and Dealers		...	1	...	2	3
Cotton Manufacturers		23	14	20	8	65
Coopers		1	3	1	1	6
Cycle Makers and Enamellers		10	11	4	7	32
Engravers		3	...	...	6	9
French Polishers		1	2	...	3	6
Ironfounders		4	5	5	4	18
Joiners, Builders, Wheelwrights, Wood Turners		12	24	6	16	58
Laundries		2	...	3	1	6
Marine Store Dealers		...	5	...	4	9
Milliners, Dressmakers, Underclothing Manufacturers		24	84	24	70	202
Picture Framers, Mount Cutters, Gilders		2	4	3	6	15
Photographers		4	3	1	3	11
Plumbers, Painters		10	13	8	20	51
Printers, Bookbinders		...	1	1	18	20
Restaurant Keepers		6	5	3	4	18
Rope and Twine Makers		2	...	2	...	4
Saddlers		...	6	1	4	11
Smiths, Black and White and Tinplate		5	9	5	27	46
Stone and Marble Masons		4	4	3	4	15
Sugar Boilers		4	1	1	...	6
Tailors		8	38	8	57	111
Watch Makers and Jewellers		8	14	8	10	40
Wire Workers		...	1	1	1	3
Offensive Trades	Fell Mongers	...	...	...	1	1
	Soap Boilers	...	...	1	3	4
	Fat and Tallow Melters	1	4	...	3	8
	Knacker Yards	1	...	...	...	1
	Gut Scrapers	...	4	...	...	4
	Tripe Boilers	1	2	...	1	4
Various		2	21	4	23	50

TABLE No. 12.

HEALTH VISITORS.

Summary of Work done during the Year 1912.

			District A.	District B.	District C.	District D.	Total.
Visits, Births.		Number of Houses visited	707	664	610	619	2600
		,, ,, Found Clean	655	628	600	565	2448
		,, ,, Found Dirty	52	36	10	54	152
	Children	Breast Fed	640	606	579	577	2402
		Partially Breast Fed ...	...	11	5	2	18
		Artificially Fed	67	47	26	40	180
	Occupation of Mother.	Home Permanently	473	355	385	412	1625
		Home Temporarily ...	234	290	217	176	917
		Home and Work	...	19	8	31	58
Visits, House to House.		Number of Houses visited	571	24	517	292	1404
		,, ,, Found Clean	503	20	409	183	1115
		,, ,, Found Dirty	68	4	108	109	289
Visits, Infectious Disease.		Number of Houses visited	740	572	555	624	2491
		Measles	311	264	362	301	1238
		Whooping Cough	149	111	65	128	453
		Chicken Pox	69	129	39	86	323
		Mumps, Ringworm, Eczema, Sore Head, &c.	211	68	89	109	477
Visits, Measles, Whooping Cough, Deaths.		Number of Houses visited	15	13	25	14	67
		,, ,, Found Clean	12	13	21	14	60
		,, ,, Found Dirty	3	...	4	...	7
Visits, Diarrhoea, Deaths.		Number of Houses visited	1	1	3	2	7
		,, ,, Found Clean	1	1	3	2	7
		,, ,, Found Dirty	...	...	...	...	...
	Children	Breast Fed	...	...	2	1	3
		Partially Breast Fed ...	...	...	...	1	1
		Artificially Fed	1	...	1	...	2
		Number of Re-visits	1248	1735	1292	794	5069
		,, Tube Bottles in use	35	57	24	77	193
		,, Cards distributed	707	664	610	619	2600
Visits. Re-visits.		Defects in School Children reported by Schools' Medical Officer	214	105	378	228	925
		,, ,, ...	210	65	...	40	315
Inspection of Heads.		Number of Schools visited......	9	7	15	5	36
		,, Children Inspected in School	1356	1275	2727	835	6193
		,, Children visited at Home ...	161	104	228	166	659
		,, Half-days in School	20	12	30	8	70

TABLE No. 13.

Return of Work done by Inspector of Food and Drugs, &c., during the Year 1912.

Food and Drugs, Samples purchased	303
Visits to Cow-sheds and Dairies	215
Visits to Slaughter-houses	3962
Meat Condemned and Destroyed	135233 lbs.

TABLE No. 14.

Contagious Diseases (Animals) Act, 1878.

Name of Disease.	Situation of Premises.	Date of Outbreak	Number of Diseased Animals.	Number of Healthy Animals.	Slaughtered by Owner.	Slaughtered by Order of Board of Agriculture	Number of Visits.
Anthrax	Slaughterhouse, Bolton's Court	Jan. 18	One	None	None	None	4
Anthrax	Holme Slack	June 24	One	19	None	None	5
Anthrax	22 Eldon Street	Oct. 21	One	18	None	None	5
Parasitic Mange	Yard in German St.	Feb. 5	One	None	One	None	6
Parasitic Mange	Golden Cross, Lancaster Road	Feb. 19	One	None	One	None	3
Parasitic Mange	Coal Yard, Deepdale	Feb. 23	One	None	None	None	9
Parasitic Mange	Militia Barracks	Mar. 11	One	None	None	None	11
Parasitic Mange	67 Fylde Road	April 10	One	None	None	None	8
Sheep Scab	Ashton Marsh	April 22	122	8	8	None	20

TABLE No. 15.

Substances formally purchased and submitted for Analysis during the year 1912.

Name of Article.	No. of Samples.	Result.
Baking Powder ...	1	Genuine.
Bread	8	do.
Butter	43	do.
Cheese	8	do.
Coffee	27	do.
Lard	43	do.
Milk	48	do.
Peper (white)	10	do.
Pepper (cayenne) .	1	do.
Sweets	6	do.
Whisky	19	do.
	214	
Brandy	1	Contained 35 per cent. of Neutral or patent still spirit.
Cheese	1	Made from partially skimmed Milk. Fat 16.5 per cent. Water 52.8 per cent.
Lard	1	Contained approximately 3 per cent. of Beef or Mutton Stearin.
Milk	1	Contained 2.33 per cent. fat, 7.65 per cent. other solids = 9.98 per cent. total solids; 10 per cent. added water. Summoned and fined 40/- and costs.
Milk	1	Contained 2.59 per cent. fat, 8.74 per cent. other solids = 11.33 per cent. total solids. Vendor summoned; case dismissed.
Milk	1	Contained 2.88 per cent. fat. Vendor cautioned.
Milk	1	Contained 2.92 per cent. fat.
Milk	1	Contained 2.95 per cent. fat.
Preserved Peas ...	1	Contained 1.1 grains of Copper, equivalent to 4.3 grains of Crystallized Sulphate of Copper per pound of peas. Vendor cautioned.
Whisky	1	30.6 degrees under proof, which is 5.6 per cent. below the Statutory limit.
Whisky	1	26.4 degrees under proof, which is 1.4 per cent. below the Statutory limit.
Whisky	1	25.4 degrees under proof, which is 0.4 per cent. below the Statutory limit.

TABLE No. 16.

Substances informally purchased and submitted for Analysis during the Year 1912.

Name of Article.	No. of Samples.	Result.
Beer (bottled)	1	Genuine.
Butter	26	do.
Cheese	1	do.
Coffee	10	do.
Cream of Tartar .	1	do.
Flour	1	do.
Lard	18	do.
Milk	6	do.
Olive Oil	1	do.
Rice	1	do.
Seidlitz Powder ...	2	do.
Whisky	1	do.
	69	
Chlorodyne Loz....	1	Contained 1.6 per cent. of Chloroform.
Coffee	1	Contained 12 per cent. of Chicory.
Coffee	1	Contained 33 per cent. of Chicory.
Milk	1	Contained 3 per cent. of added water.
Milk	1	Contained 3.02 per cent. fat, 8.03 per cent. other solids = 11.05 per cent. total solids; 5 per cent. added water.
Milk	1	Slightly watered, non-fatty solids 8.35 per cent.
Preserved Peas ...	1	Contained 1.2 grains of Copper per pound, equivalent to 4.7 grains of Crystallized Sulphate of Copper per pound.
S. Spirit of Nitre.	1	Consists of 2.3 parts, by weight, of Ethyl Nitrite, dissolved in Alcohol of approximately 50 per cent. strength.

TABLE No. 17.

Return of Port Sanitary Work for the Year, 1912.

Steamships Inspected		1190
Sailing Vessels Inspected		40
Re-Inspections		151
Condition of Vessels Inspected	Good	1208
	Defective	162
Defects Remedied:—		
Forecastle Dirty		40
Do.	Required painting	18
Do.	Deck Leaking	2
Do.	Ventilation and Light Defective	32
Foul and Defective Water Closets		62
Foul Water Casks and Tanks		9
Dirty Provision Lockers		87
Do.	Bilges	5
Do.	Chain Lockers under Forecastle	6

Public Health (Unsound Food) Regulations, 1908.

LIST OF ARTICLES INSPECTED.

Raisins
Currants
Figs
Prunes
Hams
Bacon
Lard
Lard Substitute
Flour
Oat Meal
Peas
Beans
Rice
Barley
Tapioca
Sugar
Potatoes
Nuts
Pig's Feet in Salt

Tinned Goods.

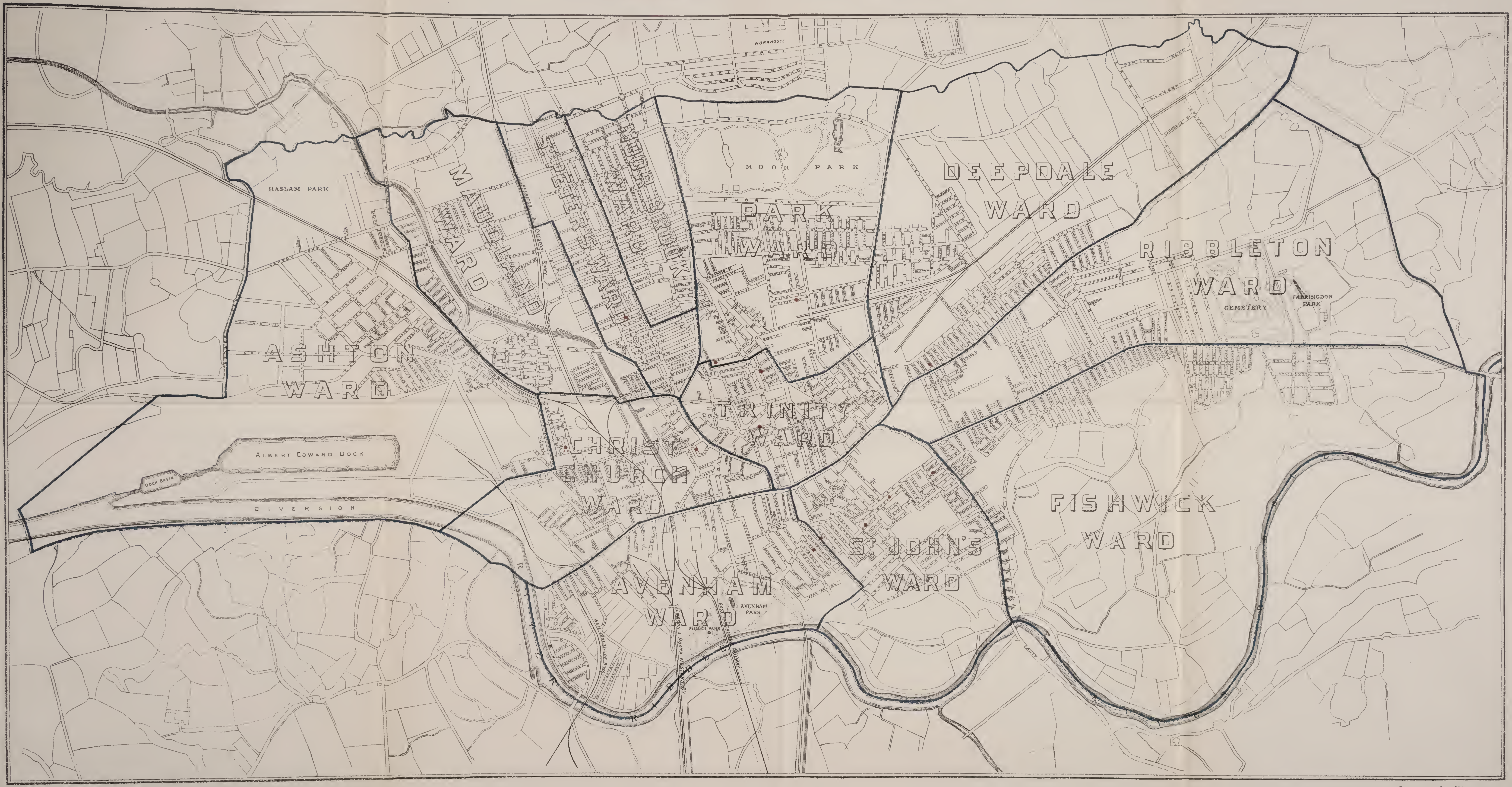
Salmon
Sardines
Beef
Mutton
Tongues
Peaches
Apples
Pears
Pineapple
Apricots
Tomatoes
Plums

Goods destroyed or rejected:—

Sugar, 7½ tons rejected, sent back for re-manufacture

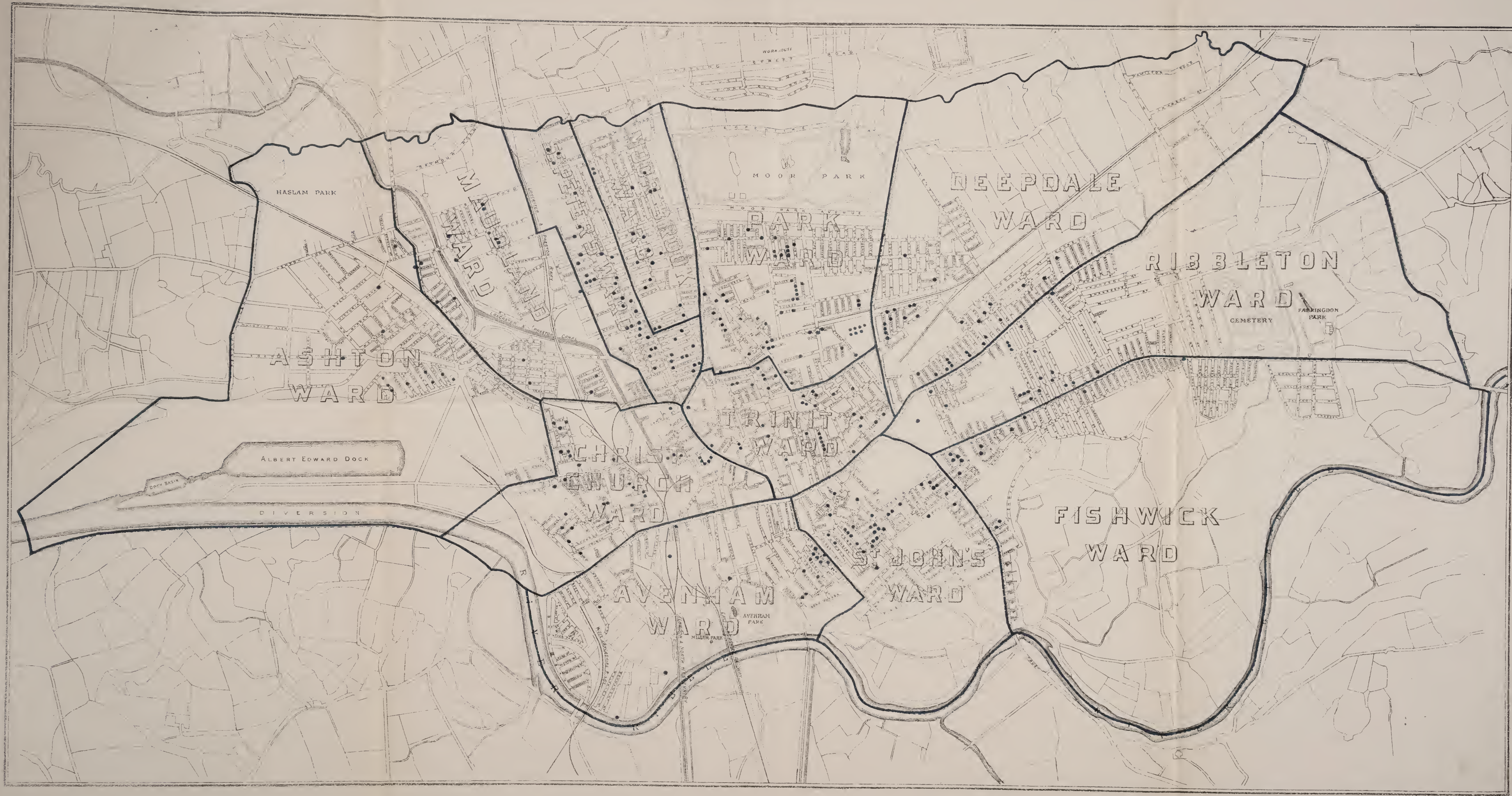
INFANTILE DIARRHŒA, 1912.

The Red Spots ● indicate Deaths from Diarrhœa under the age of One Year.



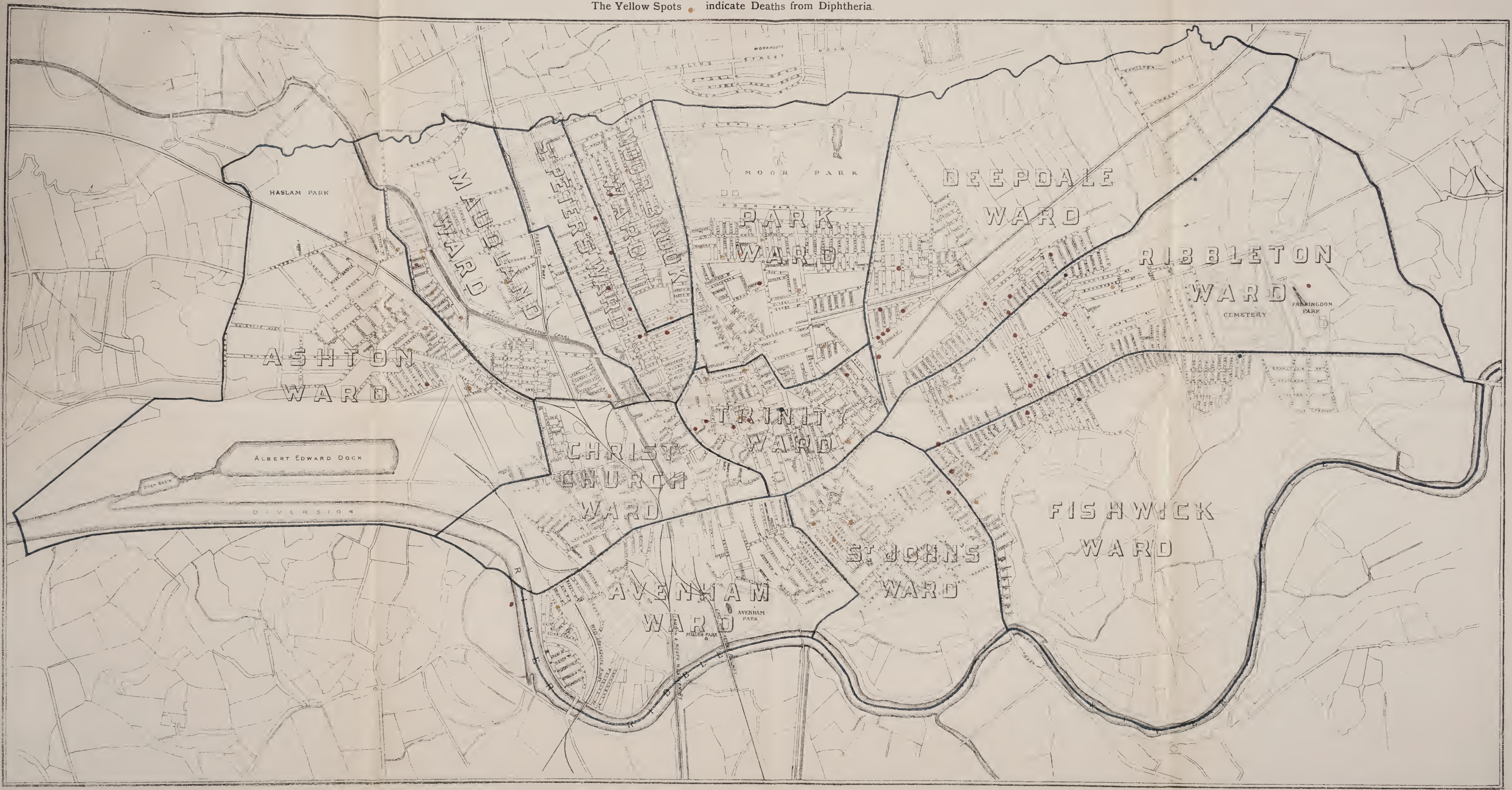
LHEA

INFANTILE MORTALITY, 1912.

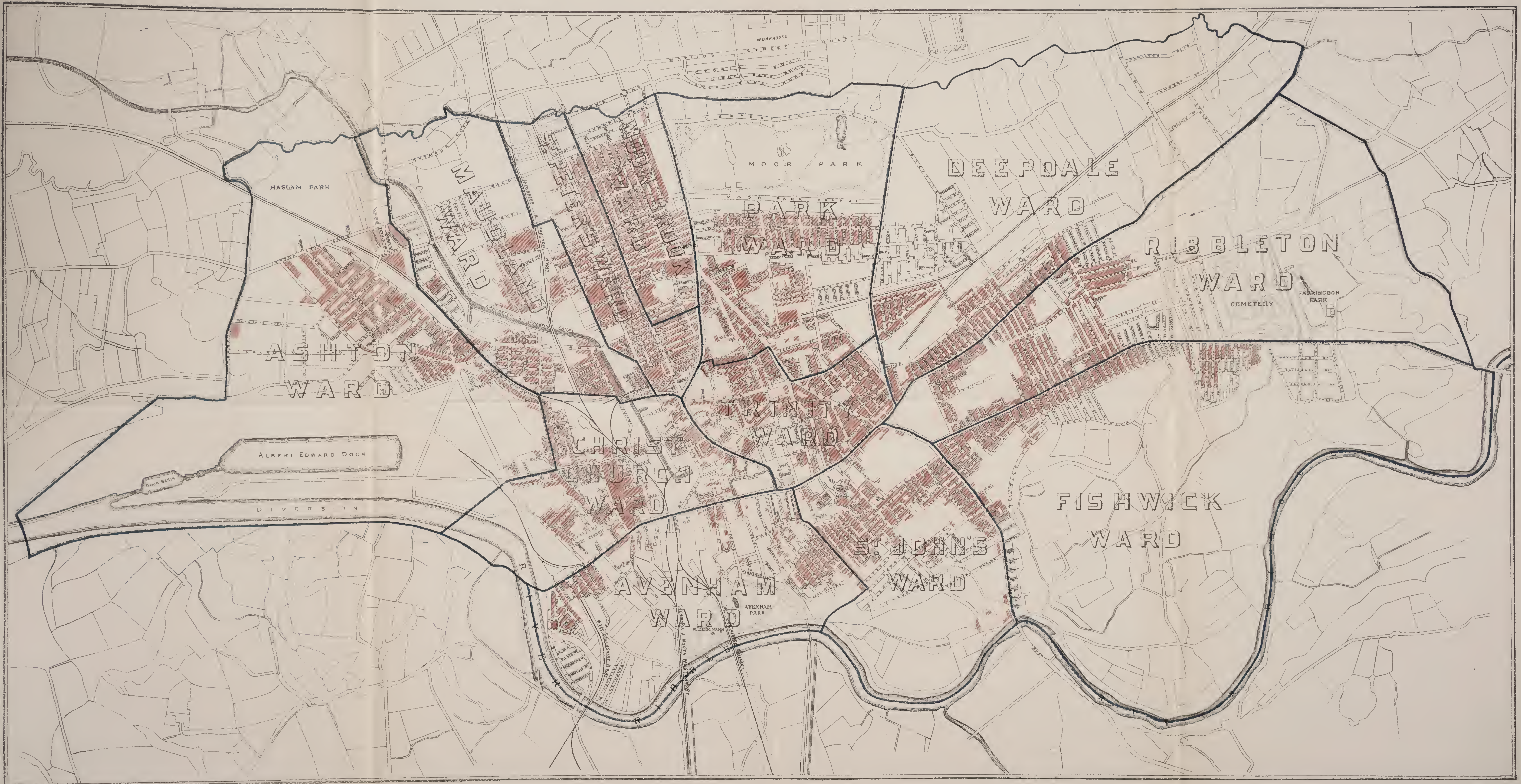


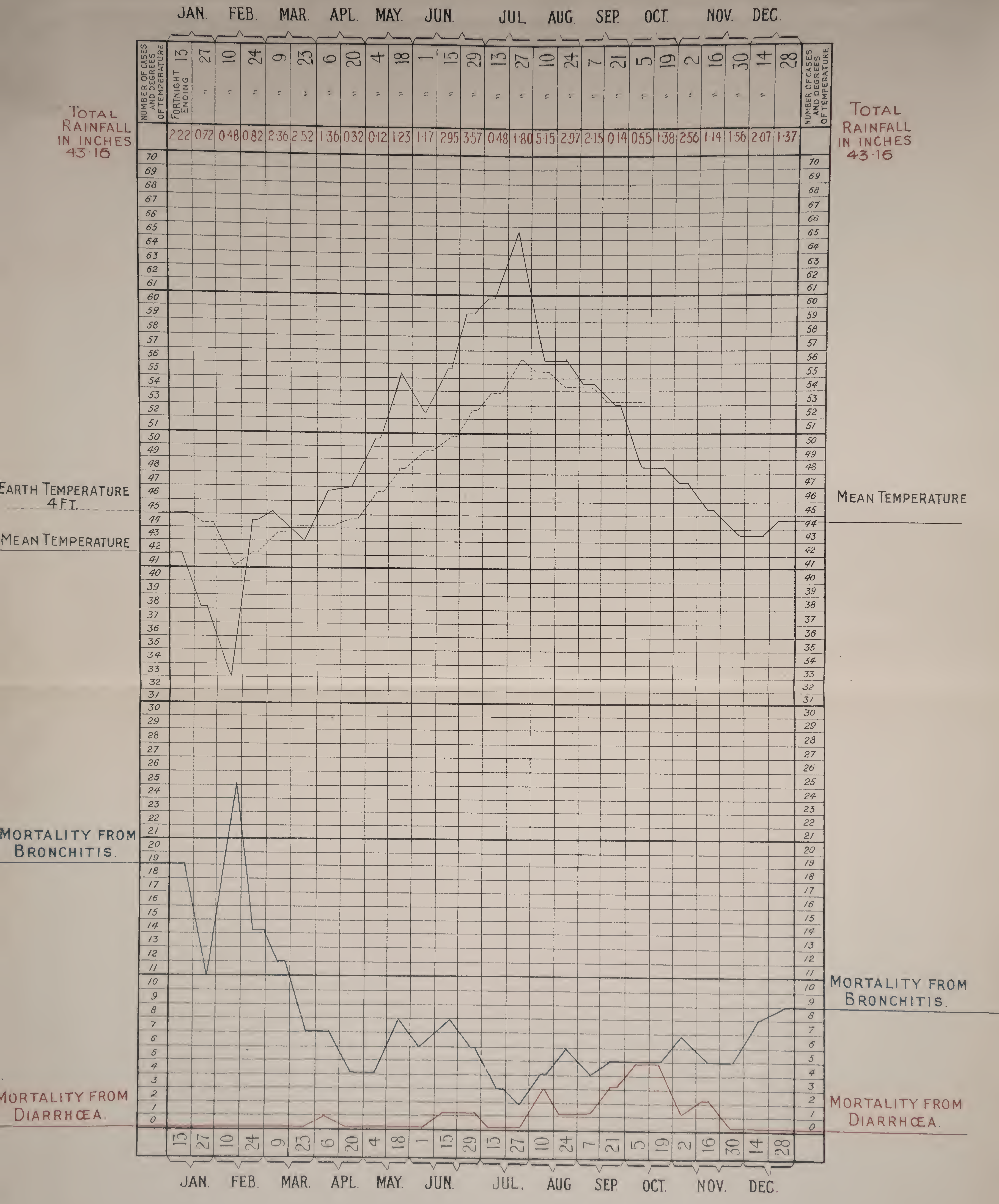
ZYMOTIC DISEASES, 1912.

The Red Spots ● indicate Deaths from Scarlet Fever.
The Blue Spots ● indicate Deaths from Typhoid Fever.
The Yellow Spots ● indicate Deaths from Diphtheria.



Portions coloured Red indicate Property reported upon and improved during recent years.




JAN. FEB. MAR. APL. MAY. JUN. JUL AUG. SEP. OCT. NOV. DEC.
Number of cases and degrees of temperature
Fortnight ending 13, 27, 10, 24, 9, 23, 6, 20, 4, 18, 1, 15, 29, 13, 27, 10, 24, 7, 21, 5, 19, 2, 16, 30, 14, 28
2·22 0·72 0·48 0·82 2·36 2·52 1·36 0·32 0·12 1·23 1·17 2·95 3·57 0·48 1·80 5·15 2·97 2·15 0·14 0·55 1·38 2·56 1·14 1·56 2·07 1·37
Total Rainfall in inches 43·16
70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Earth Temperature 4 ft.
Mean Temperature
Mortality from Bronchitis.
Mortality from Diarrhœa.

ROYAL STATISTICAL SOCIETY
27 SEP 1913